Political Money Contributions of U.S. IPOs

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Journal of Corporate Finance, Forthcoming

Abstract

We produce the first study to explore the effect of political money contributions on IPO valuation. Drawing evidence from the U.S., we show that both lobbying and PAC expenditure pay off on issue day as donors incur less underpricing, an effect that can be amplified by contribution size and strategic targeting of recipients. Donor IPOs also experience negative offer price revisions and lower aftermarket volatility. Collectively, our results offer new empirical grounding to information asymmetry and bookbuilding theories.

Keywords: initial public offering; IPO underpricing; political connections

JEL classification: G10, G14, G39.

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IN THE LAST WEEK of October 2013, with barely 15 days remaining to the planned IPO, Twitter Inc was intensifying its effort to finalize a price range for its offering. Interestingly, the firm chose this busy week to file its first-ever lobbying report. The issues lobbied for comprised a long agenda, mainly pertinent to consumer matters, foreign relations, technology and copyright. This lobbying expenditure came complementary to Twitter's newly formed political action committee (PAC) in a timely and coordinated effort to reach Washington just before the company's equity reached the New York Stock Exchange. Twitter hardly pioneered the practice of political money contributions (PMC) in light of an imminent IPO. The rival social network, Facebook, initiated its own PMC effort within the year prior to going public, and Google, back in 2004, launched lobbying campaigns in a similar time frame.

While the list of prospective issuers with a PMC record goes on, the corporate finance literature has yet to draw the link to IPO performance. Considering the prolific research on the possibilities for information flow in favor of the least informed party at the IPO event (e.g. Beatty, 1989; Megginson and Weiss, 1991; Carter et al., 1998; Certo, 2003; Chemmanur and Paeglis, 2005 and Francis et al., 2010), it is surprising that PMC activity has not been explored as a means of firms to communicate access to the highest echelon of government. The present study explores the impact of such cash flows on a company's listing endeavor by raising questions of broader public interest. Is the level of a firm's PMC spending a suitable proxy for 'political connectedness'? If so, do market participants factor in corporate political donations under circumstances of acute uncertainty such as in the IPO paradigm? Further, how do the two prevalent PMC types, lobbying and PAC, compare in terms of overall effect on IPO valuation and do they substitute or complement each other? Finally, which group of recipients should PMC firms be targeting in terms of political party (i.e. Democrats or Republicans), Congress chamber (i.e. Representatives or Senators) and individual characteristics? After all, is there such thing as an 'ideal' PMC strategy?

In an important departure from recent studies that focus on the benefits accruing to established public firms nurturing connections with political figures (e.g. Cooper et al., 2010; Ramanna and Roychowdhury, 2010; Yu and Yu, 2011 and Chaney et al., 2011), we investigate new issuers' likelihood of seizing a larger portion of the surplus created in the going-public process by means of PMC expenditure. Contributions to lobbying and PAC campaigns, within a reasonably short period before floatation, can create value for at least two non-mutually exclusive reasons. First, a connected firm enjoys proximity to other connected entities that play a role in the IPO, in particular institutional investors. Positioning itself as an additional node in the network, management can gain insight into market sentiment and issues of demand; vice versa, firm-specific cues towards the principal buyers are direct and frequent. This first-order channel of communication is likely to eliminate a significant portion of informational asymmetries in the going-public process. For more peripheral to the network parties, such as first-day investors, a traceable record of PMC could constitute important disclosure of preemptive action taken against imminent risks. At a minimum, access to the highest decision-making bodies promulgates a firm's ability to maneuver with less friction in the institutional environment, thereby mitigating

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ex ante uncertainty. Second, politically involved issuers possess sufficient bargaining power to contain an underwriter's propensity for distributing discounted IPO shares to preferred customers. An edge in the pricing negotiations may stem from: (1) the connected firm's financial autonomy, rent-extraction capability and overall reputation (Hart, 2001; Faccio, 2006; Boubakri et al., 2008 and Houston et al., 2014); (2) It can equally be a product of management sophistication, a necessary quality in order to orchestrate and go after political connections in the first place. Taken together, the setting appears opportune for PMC issuers to incur less of the foremost cost entailing the listing endeavor, i.e. IPO underpricing[2].

To test this conjecture, we assemble a large and comprehensive sample of U.S. IPO deals spanning the period from 1 January, 1998 to 30 June, 2013. We manually investigate each issuing firm in the archives of the U.S. Federal Election Commission (FEC) and Center for Responsive Politics for evidence of PMC activity within the five-year period preceding the listing date[3]. We thus obtain our special sample of interest, PMC firms. Comparing PMC IPOs' mean first-day return of 19% with the remaining IPOs' mean underpricing[4] of 29%, we come up with strong preliminary evidence for our hypothesized effect of political donations on IPO returns. Notably, assessing the fundamentals of PMC firms, we find these issuers to be associated with superior quality as proxied by market share, profitability, leverage and years of operational experience. It becomes, therefore, plausible that PMC firms, rather than seeking a 'life jacket' in politics, are involved in order to manage, in due course, the legal and institutional uncertainties that lie ahead. Our empirical findings show that this strategy becomes discernible by market participants and pays off on the first day of trade. Employing the full IPO sample, we regress underpricing on a firm's choice to engage in PMC, along with common covariates from the literature, and confirm the inverse relation; lobbying money, PAC contributions and any combination of the two PMC routes significantly result in leaving less money on the table.

Econometrically, we exercise caution in the above analysis to draw inferences least distorted by endogeneity. Given the highly discretionary nature of PMC, it is likely that firm-specific features driving the PMC decision weigh also upon IPO pricing. To account for feedback effects, we instrument for PMC involvement with a battery of established, in the relevant literature, PMC determinants while also introducing novel ones, especially tailored to the IPO setting. We estimate selection and outcome equations in a two-stage procedure applying the Heckman and the instrumental variables (IV) methods. The former approach addresses the bias stemming from firms' self-selection into the PMC practice. The IV method, instrumenting by means of fitted values, adds robustness to our selection of PMC determinants. Pursuing enhanced efficiency for the resulting coefficients, we also estimate the equations system simultaneously via maximum likelihood. Invariably, the three estimation techniques lend strong support to the validity of our inferences.

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[2] 'Underpricing' is the prevailing IPO jargon for the realized return over the first trading day.
[3] We expect the effect of PMC on IPO performance to be more pronounced with increased time proximity to the IPO day. Approximately 81% of PMC firms have exhibited their spending within the 12-month period preceding the IPO. In our robustness checks, we test the validity of our results in this special subsample as well as alternative time windows.
[4] Hereafter, we use the terms 'first-day return' and 'underpricing' interchangeably, similar to literature.

With our main conjecture confirmed, we turn our attention from the *PMC involvement* per se to *PMC level*. We draw evidence from the PMC IPO sample to ensure that results are not simply driven by size. In assessing the incremental importance of a dollar disbursed for lobbying or PAC contributions, we record that the more substantial the PMC magnitude appears, the more constraining the effect on initial return emerges. The relation is of high economic significance; *ceteris paribus*, an additional 10% PMC expenditure reduces IPO underpricing by 2.5%. In light of this evidence, far from acting as a nominal value proxy for connectedness, PMC obtains a definite investment character.

Further, we take advantage of the traceable nature of PAC contributions (as opposed to lobbying opaqueness) and study the differential effect on IPO return by recipient candidate profile. First, we draw a distinction between the two Congress chambers and test for an incremental Senate effect. Interestingly, findings dispel the popular perception that attaches special prestige to U.S. Senators; sponsoring campaigns for the House of Representatives entails more value. Second, we split across party lines and, once more, contrary to the common view accompanying the Republican Party as the 'pro-business party,' we show that a Democratic bias in contributions brings about the least underpricing. Third, we portray candidates not only as structural units of their main affiliations, but also as portfolios of distinctive characteristics of their own. To this end, we resort to the Cooper et al. (2010) taxonomy and construct the respective indexes for candidate 'strength,' 'power' and 'ability.' By and large, the cross section of these dimensions upon IPO returns reveals a more compelling effect for home state candidates and lengthy tenures of accomplishment. Given the scarcity of liquid assets in the pre-IPO regime, this insight facilitates the efficient appropriation of PAC funds based on strategic targeting of recipient candidates. Another key implication pertains to the nature of the relationship per se. That is, establishing robust links with (any type of) candidates necessitates a firm's commitment to a recurring and uninterrupted pattern of contributions. Of course, with a median firm age of 8 years at IPO, time is also in short supply. Overall, we conclude that notwithstanding the significant adversities, and to a large extent because of them, a PMC record successfully promulgates an issuer's determination to grow in political reach in parallel to the rest of its asset base.

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We expand our horizon beyond the listing day to draw support from the bookbuilding period. Following both the magnitude and direction of filing price revisions, we explore how a PMC record weighs on price discovery. Evidently, it systematically leads to downward revisions of IPO offer price. This relation, in conjunction with the modest underpricing, attests to the highballing of PMC offerings, a phenomenon that only partially reverts in light of informed investors' feedback. In this case, the underwriter foregoes a nontrivial fraction of the surplus created in the going-public process in favor of the issuer; a behavior that is in line with the bargaining power of donor firms but less compatible with the networking effect of PMC. We seek additional evidence from cases whereby the lead underwriter is also politically connected. We recognize two distinct avenues through which this becomes possible: (1) The underwriter is active in political contributions similar to IPO firms and (2) the underwriter derives connectedness indirectly through its PMC clientele. While

the results invariably corroborate our main conjecture in this study, the effect is amplified for underwriters with a scarcity of the second (indirect) type of connections. Therefore, PMC issuers are shown to be sought-after in themselves rather than as liaisons between the investment banker and the loci of power.

For a holistic study of the PMC effect, we also trace the aftermarket volatility of IPO equities. Following a matched sample approach, we assign to each PMC IPO a non-PMC closest neighbor and record the standard deviation of returns on the two portfolios within specific time intervals that extend up to a year after the issue. Invariably, the results prove that PMC shares trade significantly more smoothly than their non-PMC counterparts. In addition, we show that the wider the interval, the more sizeable the difference in mean volatility grows to be. Apparently, the PMC-driven sentiment extends well beyond the IPO event.

We subject findings to a battery of robustness exercises. First, we assess the time sensitivity of our results by introducing alternative cutoffs with regard to PMC distance from the IPO day. Second, in order to disentangle the effect of each contribution type, we rerun our main regressions for lobbying and PAC in isolation. With this testing to yield a qualitatively similar relation, our choice for grouping under a common PMC umbrella is largely warranted. Notably, the least underpriced IPOs have employed some blend of lobbying and PAC contributions. This proves that a PMC effort, in order to fulfill its mission, whether as a means to reduce information asymmetries or a bargaining weapon, needs to be both sizeable and focused; lobbying contributions cater for the size factor by being uncapped, PAC contributions provide the more personalized dimension by entering directly into candidates' campaign coffers. Third, we acknowledge the existence of a special group of PMC IPOs ('political by birth') that commence contributions shortly after foundation. We test separately for these early birds allowing for a possible covariance of the PMC effect with the corporate life cycle. With inadequate evidence to support this conjecture, though, a long apolitical past is shown to pose no threat to the PMC-stemming benefits.

This study makes important contributions to IPO and corporate finance literature while addressing concerns of mounting public interest such as the symbiotic relation between the corporate world and politics. First, we show how a firm's political donations, commonly associated with remote and indirect benefits, translate into an immediate and measurable gain on the IPO day. With a median expenditure of $ 71.5 thousand, such contributions exert a profound effect on altering the relative dynamics in an IPO sale as both underwriter and market investors factor in a firm's Washington strategy; the former assigns a premium valuation and the latter systematically maintain first-day return at a modest level. Second, we contrast lobbying and PAC spending, as the two main PMC types, and disentangle their effect on IPO performance. Highlighting special strengths and weaknesses for each strategy, we make a case about their complementary nature towards an effective mechanism for combating *ex ante* uncertainty. Third, differentiating among PAC money recipients by Congress chamber, party affiliation and individual characteristics, we devise an optimal target group for the most constraining effect upon underpricing. The implications for prospective listers are unambiguous: a dollar spent on PMC activity saves many more on the actual listing day. Sure enough, uncertainty-driven underpricing

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can be fought with alternative tools; for instance, marketing campaigns or charities. In that case, however, the advantage of a well-implemented PMC strategy would be twofold as: (1) it typically entails a dramatically lower investment; and (2) the likely benefits are expected to extend over well beyond the IPO event.

Our study relates to the works of Beatty (1989), Megginson and Weiss (1991), Carter et al. (1998), Certo (2003), Faccio (2006), An and Chan (2008), Francis et al. (2009), Cooper et al. (2010), Ramanna and Roychowdhury (2010), Yu and Yu (2011) and Correia (2014). A focal point in the IPO literature has been issuers' effort to overcome moral hazard and adverse selection concerns by signaling quality. In this regard, firms reportedly employ a plethora of means. A nonexhaustive list shows issuers targeting prestige spillovers by: (1) hiring reputable auditors (Beatty, 1989), (2) inviting VCs with a proven record of successful IPOs (Megginson and Weiss, 1991), (3) employing top-notch underwriters (Carter et al., 1998), (4) infusing management teams with prestigious executives (Certo, 2003), and (5) seeking a credit rating (An and Chan, 2008). Expanding this literature, we produce the first study to relate political donations to IPO performance and introduce PMC as a novel strategy for a prospective lister to claim value with assertiveness. Another strand of literature stemming from the interplay of politics with business (Faccio, 2006; Cooper et al., 2010; Ramanna and Roychowdhury, 2010 Yu and Yu, 2011) draws evidence from firms with several years of experience as public corporations that have developed their connections over a sufficiently large time span. From an alternate perspective, the present study fixates upon the IPO event for highlighting a firm's need to fast-track connections in the pre-IPO period, so that it cashes in benefits as early as the first day of trade.

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The rest of the paper has the following structure. Section I reviews selected studies of IPO and political connections literature. Section II develops our hypotheses. We describe our sample and contrast the two PMC types in Section III. Section IV outlines our methodology. The empirical analysis is in Section V. We test the robustness of our results in Section VI. Finally, Section VII concludes the paper.

I. Related Literature

A. Theoretical Framework

Price discovery for new equity offerings is an inherently uncertain process. The relevant literature invariably captures this uncertainty by means of listing day aftermarket performance. Since the seminal works of Stoll and Curley (1970), Logue (1973) and Ibbotson (1975) have revealed a robust pattern of abnormal positive returns, a plethora of theories attempt to explain the conundrum of IPO first-day return, which is appropriately referred to as underpricing. The asymmetries in information among the various parties involved in an IPO deal serve as a focal point for most explanations offered. For example, Rock (1986) and Beatty and Ritter (1986) maintain that in light of a de facto informational disadvantage, risk-averse investors are naturally inclined to pressure for a discount price. In parallel, effective price discovery requires unbiased feedback from engaged investors and, if possible, their proprietary insight. But since private information comes at a cost, the underwriter is likely to adjust the offer price downwards in order to provide compensation at the issuer's

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expense (see Benveniste and Spindt, 1989; Benveniste and Wilhelm, 1990 and Spatt and Srivastava, 1991). Accordingly, the need to underprice lies at the intersection of demand-side and bookbuilding factors.

Another strand of literature, also stemming from the asymmetric information framework, assigns value to underpricing and illustrates circumstances under which an issuer would concede to a large first-day return. Far from the market friction view, Welch (1992), Habib and Ljungqvist (2001) and Demers and Lewellen (2003) regard a reasonably low offer price as an effective marketing tool for appealing to an extended base of uninformed investors. The implicit assumption is that the firm will be able to capitalize in due course on the enhanced attention drawn from a euphoric IPO, recouping more wealth than what was given up at listing. Chemmanur (1993) adds increased analyst coverage to the benefits of a high initial return while a number of studies pertinent to the legal implications of IPOs highlight the lawsuit deterrence effect of a strong first-day close (Hughes and Thakor, 1992; Drake and Vetsuypens, 1993 and Lowry and Shu, 2002).

Lastly, Loughran and Ritter (2002), in a notable turn from asymmetric information to prospect theory, portray underpricing as a rather harmless vice, suggesting that initial investors, already being in a prosperous state through the amassment of IPO proceeds, rarely reckon the marginal utility foregone on the first day of trade. Yet, it is Jay Ritter who estimates on his website the cost of global IPO underpricing to be $135.12 billion. And this only captures the period 1998–2012. Consequently, the astronomical magnitude of the amount fosters skepticism against any behavioral explanations assigning a lesser importance to the efficient pricing process.

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B. Political Connections as a Value Adding Strategy

The value adding component of corporate political connections is explored in literature via two main routes; these either involve scrutiny of company insiders' proprietary network or, alternatively, apply a 'follow-the-money' approach going after cash flows directed from corporate coffers to politics.

Within an international or cross-country context, poor data availability and, on occasion, deliberately opaque interrelations between the business world and local governments typically leave no option but to directly investigate the individual profiles of corporate officials. In these cases, companies derive their connections through directors and executives who either actively engage in politics or remain closely related to others who do. Faccio (2006) applies this identification method in a comparative study of 47 countries and finds that connected firms are able to sustain larger market shares without this feature to reflect proportionately on the accounting bottom line (see also Boubakri et al., 2008). The study observes further that connected firms maintain significantly more levered capital structures as they enjoy preferential access to debt financing (e.g. lenient debt covenants), although there is no evidence of incurring a smaller interest expense than their peers. Chaney et al. (2011) assess the reporting quality of more than 4,500 firms in 19 countries and reach the conclusion that politically connected firms are not penalized for consistently underperforming in this field. Apparently, in light of political reach, accounting data shrinks in value relevance.

Tracing political connections in the U.S. at the director's level, similarly to the above studies, would likely produce less enlightening results. In the Faccio (2006) database, out of a total of 6,007 U.S. firms examined, only 13 of them qualify to be classified as politically connected. U.S.-centered literature circumvents this limitation by recognizing corporate expenditure for political purposes (overwhelmingly, lobbying and PAC) as a valid proxy for political connections. Notably, within this methodological framework, the particular PMC type appears of minor importance. For example, even though Chen et al. (2010) and Cooper et al. (2010) concentrate on lobbying and PAC contributions, respectively, they draw a common conclusion: donor firms robustly enjoy superior financial and accounting returns. Besides performance, political money has been documented to facilitate more questionable ends. Indicatively, Correia (2014) finds that PMC lower the probability of an SEC enforcement action and, even if the firm is subjected to one, the financial penalty is expected to be very moderate. Yu and Yu (2011) take this argument one step further and stress the immunity to fraud that lobbying can provide. Interestingly, "firms that lobby on average have a significantly lower hazard rate of being detected for fraud, evade fraud detection 117 days longer, and are 38% less likely to be detected by regulators."

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C. Political Connections in the Going-Public Process

Recent studies on China show that political connections can play a decisive role towards a successful IPO. Fan et al. (2007), drawing evidence from the (partial) privatizations of Chinese state-owned enterprises (SOEs), attest to the contained underpricing that these firms incur when headed by incumbent or past government officials. Corroborating this research, Francis et al. (2009) discuss the threefold benefit that a strong association with the government entails by supporting premium valuations, imposing discipline on first-day returns and reducing costs throughout the entire issuance process. Yet, the distinct character of the Chinese capital markets casts doubt on the applicability of this insight into a cross-country framework. More importantly, these connections, largely an inheritance from the past economic model, entail no cost and, therefore, may not be considered as an issuer's political strategy. Resorting to the international privatization literature, the studies of Jenkinson and Mayer (1988) and Perroti and Guney (1993) meet on the excessive underpricing of SOEs compared to non-SOE IPOs, a finding that is challenged in Dewenter and Malatesta (1997). But again, any inferences to be drawn from SOEs to the typical corporate issuer remain, at best, dubious as the *ex ante* uncertainty is fundamentally different when the state is a counterparty. In a U.S. setting, Ritter and Welch (2002), within a line that has surprisingly escaped attention, raise the speculation that underwriters employ the allocation of (discounted) IPO shares as a tool for influencing politicians. Logically, the alignment of incentives should fundamentally be revised when the issuer, rather than standing between the investment banker and the sought-after connections, assists in bridging the distance. We develop this proposition in the next section.

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II. Hypotheses Development

Political connections formed via PMC, whether the firm operates in a private or public domain, remain in essence a long-lived intangible asset and may hardly be framed as preparation for an imminent offering. Even so, a precedent of donations can profoundly alter the relative dynamics in an IPO sale. To uncover the incremental value accruing to a firm soliciting equity capital 'connected,' we rely upon two non-mutually exclusive lines of argument.

First, if, as per Logue (1977), IPO pricing mirrors an issuer's bargaining power vis-à-vis lead underwriter, a valuable deal for the former party is likely to emerge once it convincingly transmits less dependence upon the latter agent's resources. A PMC setting is in line with this spirit as: (1) the de facto esteem of connected firms simplifies the marketing effort and generally appears to be more compatible with the types of offerings that enhance an underwriter's reputational capital, rather than those relying on it for certification (as in Carter and Manaster, 1990); (2) the preferential access to alternative means of financing (Faccio, 2006; Boubakri et al., 2008 and Houston et al., 2014) allows for the possibility of either waiting until a satisfactory negotiated outcome arises or cancelling the deal altogether; and (3) the rent-extracting capacity attributable to connections (Hart, 2001; Faccio, 2006 and Cooper et al., 2010) reinforces expectations of a recurring business relationship with the underwriter, as in the case of follow-on offerings, M&A activity and trading revenue for the brokerage arm. A more subtle point can be deduced not as a result of the PMC act per se, but on the basis of management's determination to pursue one additional resource: PMC-stemming benefits. Arguably, an issuer identifying with the minority of firms that challenge the boundaries of the prevailing institutional environment and go after policymakers is also less likely to concede to a lowballing of the IPO price.

Second, PMC reduce information asymmetries for principal participants involved in the listing process. A more level playing field is attainable: (1) within a niche network of similarly politically connected people or entities. Institutional investors, without precluding other economic agents (underwriter, retail investors, financial and legal intermediaries etc.), can be central to such an association by virtue of an advanced sophistication level. In this respect, political connections shape for the IPO firm an additional channel through which it can exchange inside information for projections of demand and overall market sentiment; (2) due to the disclosure element entailing both the filing of lobbying reports and the identification of PAC recipients. Logically, reassessing an issuer's risk exposure in conjunction with all remedial action taken in the form of PMC alleviates an important portion of *ex ante* uncertainty. Let one of our opening examples, Facebook, illustrate further this notion. With intellectual property infringement posing as a primary threat, operational viability remains conditional on the protection of proprietary rights. Indeed, the firm's IPO prospectus (S-1 document), among other risk factors, declares: "If we are unable to protect our intellectual property, the value of our brand and other intangible assets may be diminished, and our business may be adversely affected." Yet, an investigation of the company's PMC activity is likely to mitigate related concerns divulging a substantial

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and ongoing lobbying effort on issues of copyright, patent and domain name protection, a campaign that was also complemented by PAC contributions towards the leadership of the relevant Congressional committees[5]. Notwithstanding the multifaceted role that a PMC record can obtain in the elimination of asymmetries, Ritter and Welch (2002) recognize that "all theories of underpricing based on asymmetric information share the prediction that underpricing is positively related to the degree of asymmetric information."

In sum, the potential channels lend support to PMC as a means of imposing discipline on first-day returns and lead to our main hypothesis:

H.1. Ceteris paribus, underpricing is inversely related to political money contributions of IPO firms.

If lobbying and PAC contributions are complementary PMC types, the firm has to devise an efficient portfolio of PAC recipients[6]. In light of the cash-constrained environment of a typical IPO firm, the targeting of candidates warrants careful study.

We first differentiate based on Congress chamber affiliation. The Senate is commonly surrounded with greater prestige than the House of Representatives. Two plausible reasons are the Senate's filibuster prerogative (the right to delay or postpone a proposal by extending debate indefinitely) and the authority 'to advise and consent' to major presidential appointments (U.S. Const. Art. II, sec. 2). Nevertheless, the majority of studies simply point to the size differential between the two Houses; undoubtedly, contrasting the 100 seats of the Senate with the 435 (voting) seats of the House of Representatives creates a strong impression of a Senatorial predominance (e.g. as in Grier and Munger, 1993). Given the above, we expect additional prestige to accrue to firms contributing preferentially to Senate candidates and the merits of being associated with the more privileged Congress chamber should reflect on IPO return.

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H.2.a. Underpricing decreases more with PAC contributions to Senate rather than House candidates.

Disentangling the effect of PAC contributions across political party lines is a more complex task. The relevant studies highlight firms' strategy to target incumbents, irrespectively of party affiliation, and converge to the conclusion that firms spend to ensure access rather than to influence the outcome of elections or for other ideological reasons (Stigler, 1971; Grossman and Helpman, 1994 and Milyo et al., 2000). Lowery and Brasher (2004: 133) describe this phenomenon in an accurate manner: "most of the economic sectors do not put all of

[5] The election cycle 2010–2011 saw substantial PMC activity for Facebook Inc. In detail, lobbying expenditure reached $ 1,701,390 and total PAC contributions $ 270,000. Among PAC recipients we note Bob Goodlatte ($ 2,000) and Mel Watt ($ 2,000) as the chairman and ranking member, respectively, of the Intellectual Property, Competition, and the Internet committee of the House of Representatives. In the Senate, PAC recipients include John Kerry ($ 2,500) and Jim DeMint ($ 2,500) as the chairman and ranking member, respectively, of the Communications, Technology and the Internet committee.

[6] Lobbying, because of its impersonal nature, does not allow for any further differentiation other than the monetary intensity of the contribution.

their eggs in one partisan basket. They give to both parties; or, more specifically they give to incumbents, which means that they give to both parties,"

Because of corporate donors' indifference, literature has turned its attention to the partisan preferences of market investors. In this respect, some early insight from Niederhoffer et al. (1970) and Riley and Luksetich (1980) associates a bullish market with the aftermath of Republican victories. At the firm level the evidence is rather mixed. Goldman et al. (2009), tracing corporate political contributions from the 2000 election cycle, refute altogether an association of the outcome of the elections with post-election market returns. In contrast, Shon (2010), also using data from the turbulent period of the 2000 Florida recount, documents a significant relation between campaign donations and stock prices. With a broader time window, Cooper et al. (2010) conclude that PAC contributions have a strong positive relation with both market and accounting measures of performance, documenting an incremental contribution effect for Democrats.

Overall, we hypothesize that a recipient candidate's partisan camp is likely to produce a differential effect on the IPO process. Considering the substantial discord in literature, however, we can hardly predict the winner's side in an unbiased manner. Thus, while leaving the direction of the relation up to empirical investigation, we note that contrary to the popular notion, Republicans may plausibly deviate from the 'pro-business' party stereotype.

H.2.b. Underpricing significantly relates to the partisan identity of candidates receiving PAC contributions.

Down to the level of individual characteristics, each candidate comprises a unique portfolio of attributes. Among them, we attach special weight to: (1) geographic scope, (2) an uninterrupted relationship with the firm, and (3) a track record of leadership while in Congress.

Faccio and Parsley (2009), in a provocative manner of pinpointing the interdependent relations between businesses and local authorities, document a decrease in share price for firms headquartered in a politician's hometown upon the announcement of her unexpected death. Within a U.S. context, Roberts (1990) had already witnessed a similar effect for Washington-based companies following the loss of Senator Henry 'Scoop' Jackson in September of 1983. In assessing the value of connections, therefore, we need to acknowledge the symbiotic relationship among the local pillars of power, especially for those firms maintaining an extended operational base in the headquarters' state. Additionally, literature favors constant streams of PAC money, as opposed to one-off or sporadic spending (Strattman, 1995, 1998 and Krozner and Strattman, 1998). Intuitive as this proposition may appear, nurturing long-term political connections is a challenging project; prospective issuers, with a median age[7] of 8 years, face severe time and liquidity constraints. But again, we expect such adversities to assert the firm's determination regarding political involvement. Finally, for a maximum impact per PAC dollar spent, we propose the selection of recipients on the basis of their relevant agenda-setting power

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[7] We use data from Jay Ritter's website in order to estimate this statistic for a time horizon exactly overlapping with the one used in this study, i.e. 1 January, 1998 to 30 June, 2013. The total sample includes 2,403 IPOs.

and collegial esteem within the Congress chambers. We proxy for these qualities by means of committee assignments and committee rankings.

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H.2.c. Underpricing decreases with recurring contributions towards home state candidates and lengthy tenures of accomplishment.

III. Data and Sample

A. Sample Selection Criteria – IPO

To assemble our sample we retrieve information from the Securities Data Company (SDC) covering the entire population of IPOs that have been floated on U.S. exchanges for the period 1 January, 1998 to 30 June, 2013. Consistent with previous literature (e.g. Loughran and Ritter, 2002), we eliminate those IPOs priced at less than $5 per share, limited partnerships, reverse LBOs, ADRs and foreign issuers whose shares may be already trading in local markets. In addition, while allowing for financial firms, we exercise caution not to include closed-end funds, REITs, royalty trusts and special purpose investment vehicles. To this end, we do not consider firms with SIC codes between 6723 and 6999 or companies that, even though they bypass Thomson Reuters filters for closed-end funds, still operate as such. Finally, we exclude corporate spin-offs; these firms have typically been parts of large, mature businesses and thus entail considerably less uncertainty than the average issuer. The remaining sample is merged with the databases of Compustat and the Center for Research in Security Prices (CRSP) from which we obtain IPO firms' accounting fundamentals and aftermarket performance data, respectively. After these interventions, we end up with a final sample of 1,578 unique IPO deals.

B. The Two Alternate Routes to PMC: Lobbying & PAC

Lobbying and PAC contributions comprise the two main avenues available for U.S. corporations to reach out to the Congress chambers. The decision to engage in either practice is made by a firm's top-echelon executives. We investigate political money spent by firms within a time frame of up to five years before the IPO date. Ultimately, this methodology generates our special sample of interest of 273 IPOs with PMC.

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Lobbying is the prevalent means, in terms of both frequency and size, by which U.S. companies interfere in the making of politics (de Figueredo and Richter, 2014). Dollar contributions made to this end (publicly disclosed under the Lobbying Disclosure Act of 1995) aim to advance a firm's perspective of the institutional framework within which it operates. Consequently, rather than being directed at specific politicians, lobbying pertains to the essence of the legislative process. Of course, the fact that no money enters candidates' campaign coffers hampers the traceability of cash flows to the individual recipient level. For example, the relevant document acknowledging a contribution succinctly mentions that a firm lobbied the "U.S. House of Representatives" or the "U.S. Senate." Notwithstanding the indirect character, lobbying constitutes a

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robust proxy for connections as lobbyists typically are political insiders with extended networks of contacts. In addition, the uncapped element of contributions enables the extent of connectedness to be quantified with accuracy. We obtain lobbying data from the files of the Center for Responsive Politics (CRP). CRP derives information directly from the semi-annual lobbying disclosure reports filed with the secretary of the Senate's Office of Public Records (SORP) and initiates coverage from the year of 1998, inclusively. Matching the IPO deals with the CRP database, we are able to identify 244 IPO firms that have reportedly engaged in lobbying.

PACs (political action committees), commonly established by firms and other special groups, have the explicit purpose of supporting or fighting against a candidate's election. The corporate treasury is eligible to provide for a PAC's operating expenses but may not grant any additional support. Instead, the funds need to originate from third-party sources for which a firm routinely resorts to its key constituents (employees, shareholders etc.). As a consequence of their traceability feature, PAC contributions constitute the most widely used proxy for corporate America's political connections (Milyo et al., 2000). We rely for our PAC data on the Federal Election Commission's (FEC) electronic archive. To extract more of the informational wealth residing in these cash flows, we manually investigate each IPO firm within the 'Candidate Master' and 'Contributions to Candidates from Committees' files so that we record the detailed profiles of the recipients (party affiliation, House membership, representing state and more). This search yields 89 IPO firms that have contributed to PACs.

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C. Descriptive Statistics & Sample Identification

Table 1 provides a preliminary description of our full sample (N=1,578) vis-à-vis the subsamples of firms with (N=273) and without (N=1,305) PMC. The period from 1 January, 1998 to 30 June, 2013 spans 8 election cycles, which we use as time frames for the IPO deals. Grouping in this manner, we illustrate that the number of PMC IPOs need not fluctuate in proportion with overall IPO activity. For example, 2004–2005 was the election cycle with the most PMC firms (60); yet the total IPOs (271) accounted for almost half of those in the 1998–1999 cycle (465). Interestingly, even though the latter period coincided with the late 90s' bubble and, hence, gave rise to the majority of IPOs (29.47% of our full sample), the number of PMC firms (30) exactly equals that of the most recent election cycle of 2012 – 30 June, 2013. There is, therefore, nontrivial evidence that the frequency of prospective issuers resorting to PMC is on the rise.

Next, we array IPOs into the divisions of the Standard Industrial Classification (SIC) code. Most PMC firms fall within the manufacturing division (34.8%) followed by the service division (26.74%) and finance, insurance and real estate division (15.02%). The findings appear plausible in light of the heavy regulatory frameworks accompanying a lot of industries within these divisions (see Appendix A for a detailed identification of regulated industries). In contrast, divisions experiencing minimal regulations exert more frugality on PMC activity (e.g. the wholesale and retail trade division accounts for a mere 5.49% of total PMC firms). Intuitively, firms most directly affected by legislation possess a stronger incentive for frequent

disbursements. Consistent with this notion, 29.30% of PMC firms come from regulated industries while the respective percentage for the non-PMC sample sharply drops to 19.70%. In addition, we observe that PMC firms are less likely to be associated with Internet or technology industries, venture capital financing and the NASDAQ exchange. Based on market capitalization, PMC firms are worth close to 5 times more ($ 2,441.55 million on average) than their non-PMC counterparts ($ 498.33 million on average) and this is not a result of overvaluation as shown by a lower Tobin's Q[8] (mean value of 2.33) compared to the non-PMC sample (mean value of 2.98).

Table 2 presents descriptive statistics for the overall sample as well for the PMC and non-PMC subsamples. We define all variables in Appendix A. Substantial preliminary evidence in support of our main hypothesis for less underpricing accruing to donor firms can be found in Panel A. First, PMC IPOs record an average first-day return of a modest 19%. This accounts for a good ten percentage points decline compared to the 29% return of non-PMC IPOs. Second, a pattern of downward offer price revisions appears, at first sight, compatible with the need to 'leave money on the table' so as to compensate informed investors for disclosing proprietary information (as per Hanley, 1993 and Loughran and Ritter, 2002). However, as we show in later sections, it primarily attests to the initial overvaluation of donor IPOs and the resulting need for correction, a phenomenon idiosyncratic to the PMC setting. Notably, it is within the PMC sample, exclusively, where the mean value of revisions (-2%) assumes a negative sign. In passing, the mean differences in returns and revisions come out significant at the 1% and 5% level, respectively.

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Panel B analyzes all IPO characteristics to be used as control variables in the subsequent regressions. On a comparative basis, PMC firms are considerably larger than their non-PMC counterparts as demonstrated by the average gross proceeds raised: $ 354 million for the former and $ 92 million for the latter IPOs. They also deliver superior profitability (captured by an earnings per share dummy) and rely less on leverage. In addition to stronger fundamentals, PMC firms possess more years of operational experience with a mean age approximating 25 years; that is about 10 years older than the average of the non-contributing sample. Consistent with the overall quality image, PMC IPOs are less likely to resort to venture capital financing and are mainly taken public by top-ranked underwriters. In contrast, stocks from the Internet or the broader technology sector, which usually have IPOs at infant stages (so as to fuel further growth), are relatively underrepresented in the PMC sample. Notably, this may also serve as a hint regarding their relative absence from NASDAQ, technology issuers' favorite listing platform. Interestingly, the dotcom period of 1999–2000, for all of its record-high IPO activity, gave rise to fewer PMC IPOs, in proportion terms, than the credit crunch crisis of 2007–2008. Finally, there is no significant difference in the percentage of retained ownership between the PMC and non-PMC group. On the whole, many of these characteristics have been shown to exert influence on IPO pricing. Any effect caused on first-day return by the new covariate in the valuation equation (i.e. PMC) must result net of the confounding factors. To facilitate this analysis, we define a cross-sectional setting in the

[8] We calculate Tobin's Q as market capitalization over the replacement cost of total assets.

next section.

For communicating the essence of contributions in a visual way, we refer the reader to Panel A of Table 3, i.e. top-fifteen IPOs ranked by PMC intensity. Overall, the first-day returns of these PMC heavyweights are dwarfed by annual average IPO returns in all but three cases (Talecris Biotherapeutics, SAIC and Mastercard). In a striking example, the second largest contributor, PentaStar Communications, documents a return of 7.5% amidst the overheated market of 1999 with the record-high mean IPO underpricing of 70.3%. From a complementary angle, Panel B presents the top-fifteen recipients of PAC money. A Republican candidate, Rick Santorum, leads the list with total PAC proceeds of $ 109.4 thousand. The general trend appears to be in favor of the Republican party and the House of Representatives. Unsurprisingly, all candidates share long tenures that span almost the entire horizon of our study.

Over the eight election cycles under research, the 273 identified PMC firms have channeled $ 74.29 million and $ 6.75 million towards lobbying and PAC contributions, respectively. The apparent lobbying bias also pertains to the particular PMC combination employed. Specifically, 184 IPOs (i.e. 11% of the total; 68% of the PMC sample) have practiced lobbying but not PAC contributions whereas 28 firms (i.e. 2% of the total; 10% of PMC) possess PAC-only experience. The remaining 61 IPOs (i.e. 4% of the total; 22% of PMC) have stayed active in both PMC types. The relative proportions are schematically shown in Figure 1.

The descriptive statistics of contributions are reported in Table 4. The mean (median) political money, a construct for aggregating lobbying and PAC amounts, equals $ 297 thousand ($ 71.5 thousand). Partitioning by contribution type, IPOs disburse about 1 dollar in PAC for every 4 lobbying dollars. The respective means are $ 75.9 thousand for PAC contributions and $ 303 thousand for lobbying. Tracing PACs down to the recipient level, IPO firms provide campaign financing to a mean (median) of 41 (10) candidates. Notably, consistent with previous work showing firms spend primarily for access, with little or no interest in the outcome of elections or ideology, the lion's share of the funds is targeted at incumbents (Grossman and Helpman, 1994 and Milyo et al., 2000). Panel A of Figure 2 graphically represents the time evolution of PMC types, by dollar magnitude and number of donor companies. Similarly, Panel B depicts the appropriation of funds by Congress chamber and political party affiliation.

IV. Methodology

A. PMC Choice & PMC Level

To fully capture the effect of PMC on underpricing we distinguish between a firm's choice to engage in PMC and cash flow recorded towards this purpose. In doing so, we cater for our reluctance to assign an a priori linear relation between PMC size and dollars left on the table. Indeed, a meticulous study on the nature of lobbying and PAC contributions reveals reasons or circumstances under which the intensity of contribution weighs less than the PMC act per se.

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According to the Lobbying Disclosure Act of 1995 (LDA), a lobbying contact is any oral or written communication (inclusive of electronic interactions) to an executive branch official or a legislative branch official that is made on behalf of a client with regard to the formulation, modification or adoption of federal laws, executive orders or government contracts, etc. Conceivably, once lobbying is framed as a communication endeavor, monetary intensity also becomes contingent to the intrinsic characteristics of the message it is meant to convey. For instance, evidence (as in Leech et al., 2005; Bonardi and Keim 2005 and Baumgartner et al., 2011) shows that messages of a salient or relevant nature consume more lobbying resources. And this is by no means conditional on outcome.

PAC contributions, in spite of an unambiguous mission (i.e. fundraising vehicle for a candidate's campaign), pose two main challenges. First, the FEC-imposed $ 10 thousand ceiling[9] on corporate contributions allows for minimal support for any particular candidate. To put this amount in perspective, 2012 data from Vital Statistics on Congress estimate the cost of winning a seat in the U.S. Senate and House of Representatives at $ 10.3 million and $ 1.6 million, respectively. More scope for differentiation can arise from the assembly of a portfolio of candidates; yet, this brings about a second challenge. Specifically, committee memberships, rankings, incumbency (as well as length of) and majority party alignment are all features that distribute unequally the agenda-setting power among elected officials (as in Cooper et al., 2010) so that the number of sponsored candidates hardly adds up to a firm's overall sphere of influence.

Given the above, the next section engages the full sample in order to assess the effect of PMC involvement on first-day return. Subsequently, we focus on the cash flow level and, drawing evidence from the PMC sample, we gauge the incremental effect on underpricing per PMC dollar spent.

B. Estimation Methods

To relate PMC involvement to IPO pricing, we specify a treatment effects model as follows:

$$Ln\,(1+underpricing)_i = a + \beta\, X_i + \gamma\, PMC_i + \varepsilon_i \qquad (1)$$

where X_i encompasses a vector of firm- and IPO-specific characteristics, PMC enters the model as a dichotomous variable, and ε_i stands for the residual term. Further, letting Z be a set of measurable determinants of PMC, we can define accordingly the selection equation as:

$$PMC_i^* = \omega\, Z_i + \eta_i \qquad (2)$$

$$\text{where} \qquad PMC_i = \begin{cases} 1, & if\ PMC_i^* > 0 \\ 0, & if\ PMC_i^* \leq 0 \end{cases}$$

[9] However, corporate PACs are not precluded from covering federal candidates' expenses. Such expenses should presumably be unrelated to electoral campaign purposes and are designated as 'independent expenditure.'

A greater degree of complication resides within the estimation approach as we can barely lend support to the stochastic independence of the variable in interest. Firms that place the legislative framework among their key operational risks are inclined to self-select themselves into the PMC practice. In addition, unobservable determinants of PMC such as a firm's extant political network and overall exposure to the institutional environment are also susceptible to influence pricing. We therefore expect these elements to enter equations 1 and 2, through ε and η, respectively, giving rise to feedback effects. Heckman (1979) proves how this selection bias cripples the reliability of OLS estimates and, ultimately, comes down to an omitted variables problem. In a setting that diverges from Heckman (1979) only in that the outcome equation regressand (underpricing) assumes a value for every observation (IPO) in the sample, we can similarly apply the proposed two-stage procedure to account for the bias. Within a corporate finance context, among others, Cohen (2003) resorts to the aforementioned method to treat the endogenous nature of the binary regressor of financial reporting quality, and so do An and Chan (2008) for a firm's decision to obtain a credit rating before an IPO.

Econometrically, we can make a case for the need for selectivity correction by rewriting equations (1) and (2) in an augmented model as shown below:

$$E[Ln(1+underpricing) \mid PMC=1] = \beta' X + \gamma + E[\varepsilon \mid PMC=1]$$

$$= \beta' X + \gamma + \rho\,\sigma_{\varepsilon}\,\frac{\varphi(\omega' Z)}{\Phi(\omega' Z)} \qquad (3)$$

Respectively, the model for the non-PMC IPO becomes:

$$E[Ln(1+underpricing) \mid PMC=0] = \beta' X + \rho\,\sigma_{\varepsilon}\frac{-\varphi(\omega' Z)}{1-\Phi(\omega' Z)} \qquad (4)$$

Subtracting equation (4) from (3), we derive the incremental expectation due to PMC:

$$E[Ln(1+underpricing) \mid PMC=1] - E[Ln(1+underpricing) \mid PMC=0] =$$

$$= \gamma + \rho\,\sigma_{\varepsilon}\frac{\varphi(\omega' Z)}{\varphi(\omega' Z)(1-\Phi(\omega' Z))} \qquad (5)$$

where Φ and ϕ refer to the cumulative and density distribution function, in this order, of the standard normal distribution.

Modeled as such, the incremental expectation coincides with the OLS estimate of (γ), which distorts the actual effect on underpricing to a direction determined by the sign of the terms in equation (5). This bias can be dispelled by the inclusion of the *inverse Mills ratio (λ)*, which is hypothesized to be the omitted variable in equation (1). The selectivity correction, conditional on PMC, obtains then the form:

$\lambda = \frac{\varphi(\omega' Z)}{\Phi(\omega' Z)}$ if PMC=1 or $\lambda = \frac{-\varphi(\omega' Z)}{1-\Phi(\omega' Z)}$ if PMC=0

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An alternative estimation approach that we employ is *full information maximum likelihood (FIML)*. Making a stronger assumption about the bivariate normality of the residual terms in equations 1 and 2, we estimate the system simultaneously. Because it processes all available information at once, FIML is a more efficient estimation technique than the two-stage procedure described above (Nelson, 1984). In addition, the FIML estimates allow us to test the null hypothesis of residual terms independence by means of the Wald test.

Finally, we relax the assumption of the normal distribution of the residuals and thus challenge the validity of our results outside the Heckman framework. This is attainable with an *instrumental variables (IV)* approach (see Wooldridge, 2002, chapter 5), which instruments for PMC, in Equation 1, via ω. The use of fitted probabilities as an instrument implies that the probit model can assume a suboptimal specification with minor effect on the IV estimates. This robustness property of the IV approach allows for flexibility in the selection of explanatory variables, a vital feature considering the substantial discord in literature about the exact PMC determinants. Incidentally, the IV setting is opportune for the Hausman test, which we conduct as an additional endogeneity control.

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V. Empirical Results

A. Determinants of PMC Activity

In this subsection, we investigate a battery of plausible incentives for political donations and report the results in Table 6. The estimation techniques previously discussed converge to a probit regression in order to model a firm's likelihood to resort to PMC. Although interesting in its own right, this regression, once augmented by IPO literature covariates, comprises the first stage of both the Heckman and the instrumental variables methods. As such, it is critical to satisfy the exclusion restriction via a regressor influencing the PMC decision but not IPO underpricing. To this end, we employ the variable *Bills introduced* referring to those ideas for legislation which have received adequate support to become a bill. Indeed, while it is unlikely that this factor affects first-day returns, firms' incentives for PMC should increase with a longer agenda of issues brought before Congress. From the side of incumbent officials, a heavier workload reasonably consumes more resources either as inputs into the legislative process (i.e. lobbying) or in the effort to reconcile the policy making consequences with the chances for reelection (i.e. PAC), so that the demand for contributions appears also larger. For a systematic study, we classify PMC determinants into four general categories: i) firm profile & visibility, ii) internal politics, iii) political exposure, and iv) operational complexity. This specification yields a pseudo-R^2 of 23.3%.

A.1. Firm Profile & Visibility

As evidenced in the descriptive statistics, PMC activity flourishes with a bigger corporate footprint. Masters and Keim (1985) illustrate how *asset* intensity reinforces a firm's ability to exert scrutiny over its

institutional environment and policy-related issues. From a rent-seeking framework, Hart (2001) views any benefits earned by PMC as accruing to firms in proportion to their size. As for the cost, larger establishments can opportunely spread it over a wider asset base. In a similar vein, a hefty level of *cash flow* proxies for resource availability. Masters and Keim (1985) make a case about the propensity of cash-affluent firms to contribute more, maintaining, nonetheless, an interesting reservation: successful firms may strategically abstain from political action in order to avoid unwanted public attention; this is particularly true for those firms that resemble monopolies and are capable of extracting rents as such. *Firm age* is a controversial variable in the sense that older firms are more likely to have invested in ties to politics and to nurture them via PMC on an ongoing basis. On the flip side, Hart (2001) upholds that their younger rivals may engage in aggressive contributions pursuing a quick fix to a perceived deficiency in political reach. However, this syndrome of making up for lost time is likely to blur their vision with regard to the value relevance of PMC investment. Finally, we include *media coverage*. Given the disclosure scarcity of the pre-IPO environment, media attention can magnify a firm's dependence on institutional environment and sketch out possible risks, above and beyond a typical 'Risk Factors' section on the S-1 form. Within this context, PMC dollars can act as a sweetener to public concerns and infuse forward-looking predictions with renewed optimism.

The probit results confirm that large and cash-affluent firms are more likely to engage in PMC. Further, media coverage obtains a positive and highly significant coefficient (at the 1% level), corroborating our last conjecture. In contrast, firm age comes out as a poor PMC determinant in the IPO setting.

A.2. Internal Politics

Theorists have indicated a plethora of organizational aspects that are directly influenced by management's political standpoint. For example, Chin et al. (2013) evidence that U.S. firms with liberal (conservative) CEOs, in the aftermath of subpar financial performance, sustain (limit) corporate social responsibility initiatives. Extending this research to political donations, they find that the more liberal the top-echelon executives appear, the more PMC spending aligns with Democratic purposes. More often than not, however, ideological or partisan preferences of management and other stakeholders, also driven by individual ambition, exist in a state of conflict and compete fiercely over the available PMC budget (for example, Hart, 2001). Thus, to the extent that contributions represent a form of perquisite consumption, organizational politics plays a decisive role in shaping a firm's PMC behavior. We allow this dimension to enter the probit model through the inclusion of the *pre-IPO management ownership* and the percentage of *unionized employees* in the firm's industry. Additionally, given the multifaceted influence that a *venture capital* (VC) firm exerts on a prospective lister (e.g. from the appointment of directors to IPO time selection), we account accordingly for its presence by means of a dummy variable. Predicting, however, the direction of this relationship entails considerable uncertainty as the cues stemming from the grandstanding theory are mixed (Gompers, 1996). It may be the case that younger VCs, anxious about gaining prestige, attach value to PMC as a time-and-cost-

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efficient tool for promoting an image of connectedness. On the other hand, because they tend to myopically fixate on the IPO day, VCs are incentivized to exert frugality as the PMC benefits can appear remote and incompatible with a short-term investment horizon.

The estimate of the probit coefficient shows that the PMC probability increases with management's equity stake at all conventional levels of significance. It also increases with the participation of venture capital (at the 10% level of significance). Given VCs' anchoring on listing time, we pay particular attention to this finding. Evidently, VCs recognize at least some short-term benefits in PMC, thereby aligning with our main conjecture in this study. In contrast, the percentage of unionized employees in the firm's industry obtains an insignificant coefficient.

A.3. Political Exposure

A firm's special competitive and geographic environment naturally claims significant explanatory power over the PMC decision. At the industry level, Zardkoohi (1985) acknowledges two possibilities: bourgeoning PMC participation may inspire firms to align efforts for benefits accruing to the industry as a whole or, alternatively, give rise to free riders as a public good. To infer the interpretation that IPO firms lend support to, we use *Industry PMC* (i.e. number of corporate donors in the same 4-digit SIC code) and the *HHI* (Herfindahl-Hirschman Index) for market concentration. To account for geography, we include the number of *Electoral College* votes corresponding to the state of the firm's headquarters. Intuitively, a larger number of local candidacies not only increases the demand for campaign funds but also perpetuates and polarizes the political debate.

Interestingly, while these variables are among the well-established PMC determinants (e.g. Cooper et al., 2010 and Skaife et al., 2013), in the IPO paradigm, we can only make a robust case (at the 1% level of significance) about our instrument (i.e. Bills introduced) and Industry PMC. Moreover, the positive association of the latter variable with PMC involvement favors the coalition over the free-ridership scenario. In passing, the coefficients on HHI and the Electoral College fail all conventional levels of significance.

A.4. Operational Complexity

Hart (2001) highlights salient implications for the role of R&D as a proxy for asset specificity; he posits that the more specific a firm's operations appear, the less power an exit threat obtains as a means of exercising pressure on policymakers. Under this framework, there should also be a positive relation between R&D and PMC involvement. We investigate this possibility by identifying via a dummy variable (*R&D*) those IPOs disclosing an R&D expenditure. PMC incentives due to complication can also arise from a rigid regulatory framework. We similarly use a dummy variable (*Regulated industry*) for regulated IPOs. As such, we designate issuers with SIC codes of 4900–4939 (electric and gas), 1300 (oil and gas extraction), 4000–4700 (transportation), 4800 (telecommunications), 4950–4959 (sanitary services) and 6000–6712 (financial

companies). Especially for those sectors in the economy experiencing government as both a regulator and buyer, the resource dependence theory predicts increased chances of contributions towards the key decision loci. We capture this dual role of government by means of a dummy variable (*Government purchases*) set to 1 for the five sectors topping the Economic Census list of U.S. public spending (i.e. defense, health, energy, transportation and education). As a last dimension to operational complexity, we take the number of a firm's *business* and *geographic segments*. Diversification at any of these levels induces contributions as at least some segments are likely to reap the benefits; this expectation causes a risk-averse management to view PMC as a somewhat safer bet (also as per Zardkoohi, 1985).

The results strongly suggest an increased PMC likelihood in the presence of escalating operational complexity. Specifically, R&D expenditure, regulated industry, government purchases and business segments all obtain positive coefficients, significant at the 5% level or better. The geographic segments make up an interesting deviation with a coefficient that is both negative and insignificant. We surmise that with greater geographic reach a firm becomes capable of leveraging its exposure to different legislative frameworks and campaign financing needs so that the PMC decision obtains a highly contextual character.

B. The Effect of PMC on IPO Underpricing

Table 7 reports our empirical results explaining the effect of PMC on underpricing for the full sample of firms (N=1,578). To demonstrate the robustness of findings, we tabulate the resulting coefficients from all three estimation methods: the Heckman two-stage procedure (Column 2), the MLE two-equation treatment model (Column 3) and the instrumental variables method (Columns 4 and 5). We reserve Column 1 for the OLS estimates to facilitate benchmarking. The dependent variable remains in all specifications the first-day return estimated as the difference between the first aftermarket price and the IPO offer price divided by the IPO offer price. Among the regressors, we include key variables that have been shown to account for much of the variability in returns. Specifically, we use:

Firm age set equal to the number of years elapsing from a firm's foundation to IPO. Previous literature commonly employs age as a surrogate for risk (Ritter, 1984, 1991; Schultz, 1993 and Carter et al., 1998). The assumption is that firms with operations dating back longer have proven their resilience against market swings and thus constitute safer investments. Acknowledging the lesser degree of uncertainty surrounding long-lived organizations, we expect them to incur smaller underpricing.

Venture capital. Hsu (2004) illustrates how "VCs' extra-financial value may be more distinctive than their functionally equivalent financial capital." Reputable venture capital financiers with a proven record of successful IPOs can lend credibility to their investment portfolio firms. Moreover, Megginson and Weiss (1991) note that they are typically involved in order to stay as opposed to cashing out at the IPO time. This vision makes venture capitalists extra cautious against any excesses on the amount of money to be left on the table. Alternatively, Loughran and Ritter (2004), shifting perspective from the certification to the grandstanding

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hypothesis, refute the long-term horizon of VCs. Instead, they describe a sense of urgency so that the latter release funds towards the next IPO targets. Of course, a premature IPO is an opportune setting for heavy underpricing. We leave the actual direction of the relationship up to empirical investigation.

IPO proceeds. We use this item as a proxy for size. Increased visibility inevitably causes larger companies to leave a proportionately bigger footprint within the investor community. Therefore, the latter can relate with more clarity to the firm so that issuer-specific uncertainty diminishes.

Earnings per share (EPS) is taken as a dichotomous variable in order to capture issuers with a positive bottom line in the year trailing the IPO. Firms attaining a sizeable accounting return should be associated with less uncertainty, and thus lower first-day returns. At the same time, profitability, in the pre-IPO period, comes second to presenting a convincing vision for sustainable profitability in the post-IPO period. In one extreme illustration, Trueman et al. (2000) find that in the realm of Internet stocks, nonfinancial measures of performance, such as the number of unique visitors and page views, dominate net income in value relevance. Consequently, we maintain mixed expectations about the sign of the EPS coefficient.

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Leverage. We estimate this ratio as pre-IPO total liabilities over pre-IPO total assets. A reasonably high level of leverage is expected to impose discipline on management consistent with the mechanisms described in Jensen (1986). *Ceteris paribus*, we expect firms relying heavily on debt financing to leave less money on the table.

Credit crunch and *dotcom period* capture the 2007–2008 turbulence in financial markets caused by the subprime mortgage crisis and the overheated period of 1999–2000 (thoroughly described in Ljungqvist and Wilhelm, 2003), respectively. They both enter the model as indicator variables.

Industry controls enter our model by means of indicator variables for *technology* and *Internet firms* to account for the excessive underpricing that these IPOs typically entail (e.g. Aggarwal, 2002). In addition, we control for the exchange by means of a *NASDAQ* dummy for being the preferred marketplace for the majority of IPOs.

Underwriter rank pertains to the perceived quality of the agent underwriting the issue. Carter and Manaster (1990) evidence significant underpricing by firms engaging prestigious underwriters and interpret it as a means to signal quality (conceivably only strong issuers are capable of assuming this cost). Arguably, an established underwriter would not risk impairing his reputational capital by facilitating an offering of dubious quality.

Share overhang, defined as the ratio of shares retained by pre-IPO shareholders to the total equity given up in IPO (refer also to Bradley and Jordan, 2002), reflects the natural dilution caused by the issuance. This cost is incurred proportionately by all shareholders retaining equity post-offering. As a result, with a large number of new shares (low overhang ratio) the losses escalate, making incentives to underprice less compelling.

Market return is estimated as the average return realized on the value-weighted CRSP index over the 20 trading days preceding the offering. It is a measure of the overall market sentiment prevailing at the time of the

IPO, and as per previous research (Logue, 1973; Hanley, 1993; Loughran and Ritter, 2002; Derrien and Womack, 2003; Lowry and Schwert, 2004 and Derrien, 2005), it is expected to positively associate with IPO return.

Revisions refer to the change of the IPO offer price from the midpoint of the initial filing price range and are a product of all public and private information that becomes available to the underwriter by the time of listing. As a complementary pricing metric, we are equally interested in its cross section with PMC and use it as an outcome variable in subsequent investigation. At the same time, one could draw from Hanley (1993) and the partial price adjustment theory to advocate its inclusion on the right-hand side of the first-day return equation. To address possible omitted variables concerns, we employ this additional covariate as a robustness exercise in Column 5.

Overall, the three estimation methods in Columns 2, 3 and 4 yield highly significant (at the 1% level) coefficients on the PMC variable and confirm the predicted negative sign. Further, the resulting coefficient magnitudes are notably consistent with each other. They also sharply contrast the OLS benchmark, in Column 1, which even though attests to the negative relation (at the 5% level), it comes out less than a fourth of the other estimates. Augmenting the baseline specification to account for revisions, in Column 5, confirms the incremental explanatory power of this covariate, yet the effect of PMC remains intact[10]. In sum, though we may not completely rule out alternative interpretations of the negative association between PMC involvement and IPO underpricing, the results accord with our twofold conjecture that PMC level off the informational playing field and confer increased bargaining power.

The findings pertaining to the control variables are interesting in their own right. We obtain a positive and highly significant coefficient on proceeds raised while presumably size should lead to less, rather than more, underpricing; this may hint at the need to attract more uninformed investors via a discount. The coefficient on age (significant and negative) corroborates previous research showing long-lived companies to be associated with more chances of survivorship, and thus less uncertainty. Consistent with Bradley and Jordan (2002), we attain a significantly positive coefficient on share overhang; dilution costs are greater in issues with lower overhang suggesting a lower underpricing and vice versa. In contrast, underpricing significantly increases with Internet and technology stocks as per Ljungqvist and Wilhelm (2003). This explanation may naturally extend to the coefficient (likewise positive and significant) on NASDAQ for being the preferred listing platform for technology issuers. Expectedly, the coefficient on the dotcom period is positive and highly significant, evidencing the excessive funds that were left on the table in the bullish period of 1999–2000. The fact that the overall market sentiment reflects on initial returns is also captured by the coefficient on market return (positive and significant at all levels). The positive and significant values on venture capital and

Commented [U59]: 'the/an underwriter'?

Commented [U60]: Not wrong but rarely used. Suggest 'are in accord' or 'are in line' …

Commented [U61]: 'PMC levels ……. and confers' or 'PMCs level …… and confer'?

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[10] The 1% threshold of statistical significance for the PMC coefficient is marginally missed. We reiterate the Heckman and MLE estimations, including the revisions variable, and attain the 1% level of significance for both methods. For simplicity, we report in Column 5 the most conservative estimate, only.

underwriter rank contradict the findings from Carter and Manaster (1990) and Megginson and Weiss (1991), though they are strongly aligned with evidence from Beatty and Welch (1996), Loughran and Ritter (2004) and Lowry and Murphy (2007). Notably, we register no significant relation for a firm's leverage and earnings per share, confirming our conjecture about the mixed signals that both disseminate to market investors. Finally, the credit crunch crisis of 2007–2008, in spite of a heavy shadow on the volume of IPO activity, appears to leave IPO underpricing unaffected.

To establish the endogenous nature of PMC, we look for separate evidence in each estimation method employed. First, the coefficient on the inverse Mills ratio exhibits high statistical significance (p=1%), lending support to our initial suspicion about firms' self-selection into the PMC practice. Second, the Wald test, involving the maximum likelihood estimators, attests to the correlation of the residual terms in the selection and outcome equations at the 1% level. Third, the Hausman test, from an instrumental variables framework, strongly indicates the presence of feedback effects (p=5%). Evidently, latent determinants of the PMC decision are also impounded into first-day returns. Taken together, these findings are in line with the rejection of the null hypothesis of no endogeneity.

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In Table 8, we focus on the PMC sample (N=273) in order to assess the effect of *PMC (dollar) level*, rather than simple *PMC involvement*, on underpricing. Including the same covariates as previously, we now use as variables of interest: (1) *political money* (Specification 1) to capture any combination of lobbying and PAC contributions; (2) *lobby money* (Specification 2) to concentrate on all lobbying IPOs; and (3) *PAC money* (Specification 3) to account for all PAC IPOs. Invariably, the resulting coefficients on these variables attain significance, at all conventional levels, while maintaining their negative sign. Consequently PMC, far from representing a nominal value proxy of 'connectedness' or a good faith gesture (in the case of PAC), proves its definite investment character with an incremental effect on underpricing for each dollar disbursed. Further, the coefficient magnitudes are non-negligible. All else being equal, a modest 10% increase in PMC spending accounts for a 2.5% reduction in underpricing. The practical implications from this relationship are important. Given the median contribution size of $ 71.5 thousand, issuers can rely on PMC as a cost-effective option for combating *ex ante* uncertainty and positioning themselves in pole position in the negotiations with the underwriter. Thus, our results come up not only statistically but also highly economically significant.

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C. The Efficient PAC Plan & Strategic Targeting for Less Money Left on the Table

With PAC contributions being an indispensable element of a well-organized PMC effort, we now explore the type of candidate that market investors want issuers to connect to. Hypothesis 2 frames candidates' overall appeal in terms of contextual as well as idiosyncratic characteristics. We test for the effect of both categories on first-day return in Table 9. In Specifications 1 through 4, we view candidates solely as structural units of their basic affiliations and aggregate contributions towards the House of Representatives (Specification 1), U.S. Senate (Specification 2), Democratic party (Specification 3) and Republican party (Specification 4).

This generic treatment of recipients provides interesting insight into the relative dynamics that candidates obtain, exclusively, by virtue of their chosen Congressional or partisan sideline. Specifically, while all regressions result in negative and significant coefficients, the House of Representatives dominates the Senate in terms of both coefficient magnitude and level of statistical significance. Similarly, Democratic candidates have a marginal advantage over Republicans. These findings cast doubt upon the value relevance of two widely held beliefs. First, the extra prestige accruing to the Senate appears less conducive to a firm's effort to preempt the political agenda. A plausible reason lies within the constitutional command for all revenue and appropriation bills to be originated in the House of Representatives. Consequently, support for the House (as opposed to the Senate) accounts for a more prompt interference in the chain of the legislative process. Second, we provide new evidence from the IPO setting that refutes the existence of a Republican bias among market participants. In this regard, we extend the work of Cooper et al. (2010) who document higher abnormal returns with the cross section of contributions to Democratic rather than Republican candidates, as we show that the latter also fall short in the mitigation of *ex ante* uncertainty.

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At the micro level, we test candidate features that are expected to influence IPO valuations as per Hypothesis 2.c. In order to exploit further the traceable nature of PAC contributions, we abandon the 'follow-the-money' approach that has been used so far in the study and replace the variables of interest with comprehensive measures of candidate characteristics. Following the recent literature (e.g. Correia, 2014 and Aslan and Grinstein, 2012), which increasingly resorts to the constructs of Cooper et al. (2010), we introduce the following indexes:

1) The first index, $PI^{STRENGTH}$, is expressed as follows:

$$PI_{it}^{strength} = \sum_{j=1}^{J} Candidate_{jt,t-5} \times I_{jt} \times \frac{NCV_{jt}}{NOV_{jt}} \times rellength_{jt,t-5}$$

where $Candidate_{jt,t-5}$ is a binary variable assuming the value of 1 if the firm has raised PAC money in support of candidate j over the period t−5 to t; I_{jt} is a binary variable set to 1 if candidate j has been an incumbent at time t, and 0 otherwise; NCV_{jt} is the number of votes that candidate j's party holds in office at time t; NOV_{jt} is the number of votes that candidate j's opposing party holds in office at time t; and $rellength_{jt,t-5}$ is the number of months that the relationship between firm i and candidate j spans assuming uninterrupted PAC contributions until time t.

2) The second index, PI^{POWER}, is defined as follows:

$$PI_{it}^{power} = \sum_{j=1}^{J} Candidate_{jt,t-5} \times I_{jt} \times \left[\sum_{m=1}^{M} \frac{Committee\ rank_{mt}}{Median\ committee\ rank_{mt}} \right]$$

where Committee $rank_{mt}$ is the reciprocal of candidate j's rank on committee m; Median committee $rank_{mt}$ is the median number of members on a given committee m of which candidate j is a member; and the rest of the variables are defined as above.

3) The third index, $PI^{ABILITY}$, is expressed as follows:

$$PI_{it}^{ability} = \sum_{j=1}^{J} HomeCandidate_{jt,t-5} \times I_{jt} \times \frac{NCV_{jt}}{NOV_{jt}}$$

where $HomeCandidate_{jt,t-5}$ is a binary variable set to 1 for contributions supporting candidacies from the state of a firm's headquarters, and 0 otherwise. All other variables are defined as above.

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We present the results of this last set of regressions in Specifications (5), (6) and (7). The coefficient signs are invariably negative with $PI^{STRENGTH}$ and PI^{POWER} attaining statistical significance at the 1% level, whereas $PI^{ABILITY}$ is significant at the 10% level. Accordingly, the candidate characteristics that we have assumed to instill confidence in the prospects of a new public firm are valid: (1) veteran Congress members with a proven record of career progression and (2) local politicians, to a lesser extent, are conducive to maintaining first-day returns within range. Intuitive as this relation appears, we note that a firm's political capital is subject to all challenges residing in intangible assets valuation (e.g. lack of measurement scale or absence of control over future benefits). In this respect, connections have to overcome intrinsic uncertainty also pertinent to their relative strength, power and ability, as defined above, before they claim any positive spillovers to issuer-related uncertainty. To this end, candidates scoring highly in the three indexes merit priority in PAC funds appropriation for posing as more value-increasing targets compared to other colleagues in Congress or new challengers.

D. A Closer Look at the Causes of the Limited Underpricing of PMC IPOs

Acknowledging the multifaceted influence that a PMC strategy can exert on an IPO sale, we seek seperate evidence in support of its appeal to market investors and lead underwriter.

D.1. Volatility Behavior of PMC and Matched non-PMC IPOs beyond the Listing day

Could an extant PMC record impose discipline on subsequent returns realized on PMC shares in the same manner that it does on first-day returns? If so, PMC IPOs can be plausibly less underpriced because of fewer concerns among investors relating to liquidity or the level at which a politically connected stock will trade. To explore this enquiry, we follow a matched-sample approach, assigning to each PMC IPO a non-PMC counterpart of the same listing year and 2-digit SIC code. These criteria bring about the elimination of 72 IPOs or, approximately, 25% of the PMC sample. From the resulting matches, we further filter for proceeds raised

and choose the IPOs exhibiting the greatest proximity in this feature. Ultimately, this method leaves us with a sample of 201 PMC IPOs to be assessed vis-à-vis a sample of 201 nearest neighbors.

The variable of interest, volatility, is taken as the standard deviation of daily returns realized within a short time frame subsequent to floatation (similar to Ritter, 1984). We set this interval to 60 days and report the statistics in Table 10. To account for a probable roller coaster course of share prices within the first few trades, we allow for 7 trading days to elapse and start recording returns at day 8. For robustness purposes, we reiterate this analysis using the intervals of 120 and 365 days. In all cases, the PMC securities entail significantly lower (at the 1% level) volatility than their matched counterparts. Indicatively, over the 60-day horizon, the mean volatility of the PMC IPOs (3.1%) is 18% lower than that of non-PMC IPOs. The difference is accentuated by the number of days elapsing: PMC IPOs are 21% and 31% less volatile when measured over the 120 and 365 days, respectively. Notably, while the standard deviation of volatility remains constant across time for the PMC IPOs (at 1.3% to 1.4%), it increases in excess of 50% across the periods for the non-PMC IPOs, so that the matched sample yields a standard deviation as high as 6.9% over 365 days. Overall, the aftermarket evidence suggests considerably less discord on the value of PMC shares.

D.2. Bookbuilding for PMC Equities & Underwriters' Own Political Ties

To complement our buy-side findings, we now bring to the forefront the role of the underwriter and see whether we can meet again at an underpricing containment conclusion. To this end, we rely on two sets of tests.

First, we draw evidence from the price discovery process. A smooth ride of PMC equities on the first day of trade, and beyond, invites debate as to whether it reflects the outcome of an equally smooth bookbuilding period or a hard-fought balance among powerful participants. To the extent that political connections can facilitate information flow, they are expected to obviate, to a significant degree, the need for residual information production and subsequent interventions in pricing (as per Benveniste and Spindt, 1989 and Hanley, 1993). Alternatively, in line with the bargaining power argument, political connections are a notion potent enough to constitute the underwriter more conceding to management's value claims. There is, thus, increased likelihood of the investment banker producing an initial price range inflated by an implicit PMC premium and soliciting investor bids from a high stating point.

Commented [U69]: Sense? Do you mean 'underwriters' or 'an underwriter'?

Commented [U70]: Is this the correct intention rather than 'conceding more'?

Commented [U71]: Is this the correct intention rather than 'an'?

Relevant studies consistently operationalize bookbuilding turbulence in terms of the offer price deviation from the midpoint of the initial filing price range (Benveniste and Spindt, 1989; Benveniste and Wilhelm, 1990; Spatt and Srivastava, 1991; Hanley, 1993; Cornelli and Goldreich, 2001 and 2003). Because of its comprehensive nature, we expect this metric to lend itself equally well in describing bookbuilding under a PMC regime. We explore this cross-section in Table 11. All covariates of the earlier specifications retain their place in the new regressions as pricing for bookbuilding participants and aftermarket investors is driven by the same firm- and IPO-specific characteristics (refer for a proof to Lowry and Schwert, 2004). We thus leave the

right-hand side of the equation unchanged, adjusting only for *market return*, which now captures the holding period return from filing to IPO day.

Due to the endogeneity concerns previously discussed[11], Columns 1 and 2 present the instrumental variables estimates of the model with the dependent variables to be absolute filing price revisions (*Absolute revisions*) and filing price revisions (*Revisions*), respectively. Investigating the magnitude of revisions vis-à-vis their sign reveals a distinct pricing pattern for connected equities. In particular, the insignificant coefficient on PMC in Column 1 indicates that connected equities are generally not any easier to value than other IPOs. As shown in Column 2, however, the average revision in the PMC regime comprises a sizeable (13%) downward adjustment; a finding which fulfills all conventional levels of statistical significance. Therefore, the monotonically negative effect lends support to issuers' bargaining power for attaining an initial valuation that is ultimately proven overoptimistic. At the same time, this also suggests an informational disadvantage from the perspective of the underwriter which casts doubt on the networking effect of PMC.

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Second, we consider the possibility that the underwriter is also connected. If underwriters with no traceable links to politics perceive clients' connections as substitutes, they are incentivized to exert more effort towards retaining connected issuers. Consequently, this subsample could introduce bias and overstate the overall PMC effect. To investigate for a differential pricing behavior, we collect further data on the lead underwriter's political expenditure in an approach identical to that for PMC issuers. Therefore, our baseline model is augmented by the interaction of PMC with an *unconnected* dummy variable (Column 3). In an alternative definition, whereby connectedness arises indirectly through a PMC clientele, the *unconnected* dummy is set to 1 for underwriters facilitating no more than 1 PMC IPO in any given year (Column 4).

Two conclusions can be drawn from the resulting estimates. First, with the PMC coefficient maintaining the negative sign (at the 5% level of significance) across both specifications, an IPO firm can expect to benefit from a political strategy regardless of the chosen underwriter; issuer's and investment banker's PMC do not cancel each other out. Second, with the interaction term exhibiting statistical significance (at the 5% level) for indirectly connected underwriters only, we show that attracting PMC IPOs comprises an end in itself as opposed to a means for establishing ties to politicians. This finding is in accord with evidence from Houston et al. (2014) showing lower spreads on connected firms' loans as a result of their perceived creditworthiness rather than a banker's attempt to cajole the borrower's network.

Overall, a PMC record can alter the relative dynamics in an IPO sale. In particular, it constitutes the investment banker more conceding at a time when the issuer comes at it strongest. This setting comprises an alternative, yet complementary, explanation for the moderate underpricing of PMC IPOs.

[11] In a methodologically similar manner to the first-day return equation of Table 7, we conduct the Hausman test and reject the null of no endogeneity. Although these statistics are not reported in Table 11, in the interest of clarity, they are available from the authors upon request.

VI. Additional Robustness Tests

A. Sensitivity Analysis

Our main concern about the validity of results is twofold, pertaining to the time and type of PMC. In this section, we adopt a sensitivity analysis framework allowing for both of these dimensions to vary. To facilitate comparison, Panel A of Table 12 recaps the instrumental variable estimates γ_1 and γ_2 for the effect of PMC on initial return and filing price revisions, respectively.

With regard to time, we have been content so far to record cash flows extending up to 5 years prior to floatation day. This line was drawn due to database limitations and, more importantly, out of the authors' belief that older PMC, even though historically interesting, are devoid of potent signaling value. An illustration would entail the longest-tenured (6 years) representatives, i.e. Senators. Given the staggered-terms structure, one third of the Senate seats are up for election every couple of years. Therefore, a donation dating longer than five years may apply to the Senate's oldest third only. But even this minority of Senators would be, by that point, amidst a new electoral campaign requiring fresh funding. This sequence of events underscores a firm's need to fine-tune PMC with the listing project so that a dated PMC record does not turn into a sunk cost. As for firms with no prior donation experience, such a time interval is adequately large for a PMC momentum to evolve and promulgate connectedness even as a work in progress.

This argument could also backfire, rendering our 5-year horizon questionable in favor of a shorter period. To explore this possibility, we stratify PMC IPOs into three subsamples based on floatation day proximity: (i) 119 firms exerting PMC within a period of 6 months or less; (ii) 120 IPOs with PMC older than 6 months and up to a year; and (iii) the remaining 34 IPOs with PMC dating older than one and up to five years. For each of these groups, we reiterate our main regressions for the effect of PMC on both initial return and filing price revisions. In the interest of brevity, Panel B focuses on the resulting coefficients, γ_1 and γ_2, which convey the gist of our analysis. Evidently, time considerably undermines γ_1 and γ_2 in magnitude and statistical significance across the two specifications. As a consequence, PMC of the 6 most recent months invariably attain the most compelling effects. The strongest evidence in support of the recency argument comes from the return equation; once the 6 months' cutoff has been violated, PMC dating no longer than a calendar year prior to the IPO results in an almost identical effect to PMC that is up to five years old. In parallel, the statistical significance of the coefficients descends the conventional levels, fulfilling, however, the 10% threshold even for the earliest cash flows. The sensitivity to time extends to the revisions equation and coefficient γ_2. The differentiation comes from a high coefficient magnitude for the full 12-month period preceding the IPO, which shrinks nearly by half beyond our second cutoff, while also abolishing the high statistical significance.

Next, we test for the particular cash flow type. So far, we have drawn from the asymmetric information and bookbuilding theories to argue that it is PMC involvement (and level of) that arouses market participants' confidence, assigning a somewhat incidental role to the preferred avenue (i.e. lobbying, PAC and their between

Commented [U73]: 'PMC …… is' or 'PMCs …… are'?

Commented [U74]: '5'?

Commented [U75]: Or " firms' "?

Commented [U76]: Sense? Do you mean 'a work in progress' or 'work is in progress'?

Commented [U77]: '1 and up to 5'?

Commented [U78]: 'PMC …… attains' or 'PMCs …… attain'?

Commented [U79]: '5'?

Commented [U80]: Sense? Not sure of the intention here … Do you mean 'reduces'?

combinations). Yet, we have to rule out the possibility that positive externalities of either PMC type flow into, and artificially inflate, the effect of the alternate type. To this end, we split the sample further in order to explicitly account for: i) 61 firms that have employed both PMC methods; ii) 184 firms that have lobbied for but not contributed to PAC; and iii) 28 firms that have contributed to PAC but not lobbying. Panel C disentangles the differential effect of each possible spending manner. As expected, the effect on both initial return and price revisions is highly robust to PMC type with γ_1 and γ_2 significant at the 5% level or higher. Notably, significance is maximized when '*Both lobby-PAC*' is used, for no other sample attains the 1% level in both equations. Therefore, this analysis sheds light on the complementary nature of lobbying and PAC contributions. We conjecture that the personal nature of PAC contributions enables and reinforces more effective lobbying, in the sense that it creates more 'eager ears' for the issues that the company lobbies for. On the other hand, malleable policymakers are of little use in lieu of the strategic communication element entailing a well-implemented lobbying effort. In an optimal setting, investors aspire to anchors in politics with both *relevant* and *current* information flowing among them. Accordingly, we identify the anchors in PAC contributions and the information flow in lobbying.

B. Political by Birth & Other Tests

In a subsequent robustness exercise, we revisit the time dimension of PMC from a new perspective. Specifically, one may argue that time is not only important with regard to listing but also a firm's foundation. Indeed, our sample includes firms, such as Rex Energy and Molycorp, that commence contributions almost concurrently with their legal formation as corporate entities. This sense of urgency testifies to the existence of a group of *political by birth* firms that grow their political connections in parallel with the broader asset base and, therefore, appear to have politics deeply ingrained in their corporate culture. Thus, to the extent that the effect of PMC on IPO valuation is conditioned upon the stage of the donor's life cycle, we would expect the relationship to be stronger for political by birth firms and questionable for more mature organizations.

To investigate this proposition, we rerun our main regressions, interacting PMC with an indicator variable for political by birth companies. Allowing for flexibility in the definition of the new factor, we reiterate the analysis by designating political by birth those firms of ages not exceeding: (1) the first quartile value of the full sample (PMC sample) of 4 years (5 years); (2) the median value of the full sample (PMC sample) of 8 years (11 years); and (3) an arbitrarily chosen threshold of 2 years. In all regressions the resulting coefficient on the interaction variable remains insignificant. In simple terms, this shows that an apolitical past, in reference to contributions, will not penalize or weigh adversely upon prospective issuers contemplating to practice PMC at an advanced stage in their corporate life cycle.

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We challenge further our findings to address other probable sources of bias. This involves the following variations : (1) replacing the dependent variable of raw initial returns with market-adjusted returns based on the NYSE/AMEX/NASDAQ value-weighted index; (2) measuring underpricing to the end of the 11th trading day

and 1st trading month (Chambers and Dimson, 2009); (3) excluding all IPOs in industries with SIC codes 6 (for example, as in Lowry and Shu, 2002); (4) winsorizing returns and contributions at the 1st and 99th as well as 5th and 95th percentiles; (5) scaling PMC amounts by IPO proceeds; (6) including dummy variables for IPOs occurring within years of Congressional and presidential elections; (7) adjusting contribution amounts and IPO proceeds for inflation; and (8) specifying the Heckman model in lieu of exclusion restrictions so that it becomes identified solely by the nonlinearity of the inverse Mills ratio. In all tests, the results remain qualitatively similar and, in the interest of brevity, are suppressed. Thus, there is robust evidence in support of the main conclusion of the study: PMC systematically drive downwards first-day returns (and IPO offer price revisions).

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VII. Conclusion

In the first study to relate a firm's political donations to IPO valuation, we argue that these cash flows can create value in the going-public process spearheading expectations of access to the upmost decision-making bodies. Indisputably, the ultimate mission of PMC is to foster a firm's perspective on issues pertinent to corporate strategy rather than the IPO event per se. Even so, a traceable and publicly available PMC record is capable of alleviating an important portion of issuer-specific uncertainty while conferring substantial power in pricing negotiations with the lead underwriter. Our empirical evidence lies at the intersection of demand and supply side reasons as: (1) market investors are shown to confide in a connected firm's ability to maneuver with less friction in the institutional environment and (2) the underwriter systematically commences the price-discovery process from a high starting point as evidenced by a pattern of downward offer price revisions. Overall, the opportune setting for maintaining first-day returns within range entails substantial implications for prospective issuers; all else being equal, an additional 10% PMC expenditure reduces IPO underpricing by 2.5%. With a median contribution of $ 71.5 thousand for the donor firms in our sample, PMC pose not only as a potent but also as a surprisingly cost-effective strategy.

Commented [U83]: " a firm's " or " firms' "?

Commented [U84]: 'highest'?

Commented [U85]: " a firm's " or " firms' "?

Commented [U86]: 'an underwriter systematically assigns a lofty filing price and commences' or 'underwriters systematically assign a lofty filing price and commence'?

Commented [U87]: 'PMC poses' or 'PMCs pose'?

In response to the questions raised in the introduction, the study shows that a PMC file constitutes a suitable proxy for a firm's 'political connectedness' on the premise that it is both substantial and traceable to specific politicians. To this end, we argue about the twofold nature of an effective PMC strategy as it necessitates lobbying expenditure for size and PAC contributions for identification. In devising the optimal spending pattern, we find that the effect on IPO return is maximized by targeting candidates identifying with the Democratic party and the House of Representatives. At the level of individual characteristics, lengthy tenures of accomplishment and home state candidacies come up as value-adding features. Importantly, the fundamentals of PMC firms show issuers of superior quality as demonstrated by market share, profitability, leverage and years of operational experience. Evidently, PMC firms, rather than seeking a life jacket in politics, are involved in order to manage promptly the legal and institutional environment risks lying ahead. Newly founded issuers or those associated with a long apolitical past are equally entitled to PMC-stemming benefits with veterans in donations, attesting to the appeal of political connections even as a work in progress. With

negligible barriers to entry, the ultimate challenge for issuers rests in synchronizing political expenditure with the listing endeavor. In this regard, our sensitivity analysis reveals the urgency for fulfilling a 6-month threshold trailing the IPO so as to constrain first-day return to the maximum extent.

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We pave the way for follow-up investigation by offering a glimpse of the PMC-driven sentiment past the IPO event. Tracing the trades of PMC shares deeply into the aftermarket period, we document significantly lower volatility than a matched portfolio of non-PMC IPOs. A limitation of this research pertains to lobbying contributions that, subsequent to the Lobbying Disclosure Act of 1995, are available in databases from 1998 onwards. In conjunction with the overall number of PMC IPOs, a study on the long-term performance and survivorship is likely to encounter sample size as a challenge. However, as more of our identified PMC IPOs age, we anticipate, in the near future, research adding evidence from this alternate horizon.

References

Aggarwal, R., L. Krigman, K Womack, 2002, Strategic IPO underpricing, information momentum, and lockup expirationselling, *Journal of Financial Economics* 66, 105-137.

An, H. and K. C. Chan, 2008, Credit ratings and IPO pricing, *Journal of Corporate Finance* 14, 584-595.

Ansolabehere, S., J. de Figueiredo, and J.M. Snyder., 2003, Why is There so Little Money in U.S. Politics?, *Journal of Economic Perspectives* 17, 105-130.

Aslan, H. and Y. Grinstein, 2012, Political contributions and CEO Pay, Working paper, University of Houston and Cornell University.

Baumgartner, F. R., H. A. Larsen-Price, B Leech, 2011, Congressional and Presidential Effects on the Demand for Lobbying, *Political Research Quarterly,* 64, 3-16.

Beatty, R., 1989, Auditor reputation and the pricing of IPO's, *Accounting Review* 64, 693-709.

Beatty, R. and J. Ritter, 1986, Investment banking, reputation, and the underpricing of initial public offerings, *Journal of Financial Economics* 15, 213-232.

Beatty, R. and I. Welch, 1996, Issuer expenses and legal liability in Initial Public Offerings, *Journal of Law and Economics* 34, 542-602.

Benveniste, L. and P. Spindt, 1989, How investment bankers determine the offer price and allocate new issues, *Journal of Financial Economics,* 24, 343-361.

Benveniste, L. and W. Wilhelm, 1990, A comparative analysis of IPO proceeds under alternative regulatory environments, *Journal of Financial Economics* 28, 173-207.

Bhattacharya, S., 1979, Imperfect information, dividend policy, and 'The bird in the hand' fallacy, *Bell Journal of Economics* 10, 259-270.

Bonardi, J.-P. and G. D. Keim, 2005, Corporate Political Strategies for Widely Salient Issues, *Academy of Management Review* 30, 555-576.

Boubakri, N., J.-C. Cosset, W. Saffar, 2008, Political connections of newly privatized firms, *Journal of Corporate Finance* 14, 654-673.

Bradley, D. and B. D. Jordan, 2002, Partial adjustement to public information and IPO undepricing, *Journal of Financial & Quantitative Analysis* 37, 595-616.

Carter, R., F. Dark, A.K Singh, 1998, Underwriter reputation, initial returns, and the long-run performance of IPO stocks, *Journal of Finance* 53, 285-311.

Carter, B., and S. Manaster, 1990, Initial Public Offerings and the underwriter reputation, *Journal of Finance* 45, 1045-1067.

Certo, S.T., 2003, Influencing Initial Public Offering investors with prestige: Signaling with board structures, *Academy of Management Review* 28, 432-446.

Chahine, S. and M. Goergen, 2011, The two sides of CEO option grants at the IPO, *Journal of Corporate Finance* 17, 1116–1131.

Chambers, D. and E. Dimson, 2009, IPO underpricing over the very long run, Journal of Finance 64, 1407-1443.

Chaney, P., M. Faccio, D. Parsley, 2011, The quality of accounting information in politically connected firms, *Journal of Accounting & Economics* 51, 58-76.

Chemmanur, T., 1993, The pricing of Initial Public Offerings: A dynamic model with information production, *Journal of Finance* 48, 285-304.

Chemmanur, T. J. and I. Paeglis, 2005, Management quality, certification, and initial public offerings, *Journal of Financial Economics* 76, 331-368.

Chen, H., D. C. Parsley, Yang, Ya-Wen, 2014, Corporate lobbying and firm performance, Working paper - University of Colorado at Boulder.

Chin, M. K., D. C. Hambrick, L. Treviño, 2013, Political Ideologies of CEOs: The Influence of Executives' Values on Corporate Social Responsibility, *Administrative Science Quarterly* 58, 197-232.

Cohen, D., 2003, Quality of financial reporting choice: determinants and economic consequences, New York University, Working Paper.

Cooper, M., H. Gulen, A.V. Ovtchinnikov, 2010, Corporate political contributions and stock returns, *Journal of Finance* 65, 687-724.

Cornelli, F. and Goldreich, D. 2001, Bookbuilding and strategic allocation, *Journal of Finance* 56, 2337-2369.

Cornelli, F. and Goldreich D. 2003, Bookbuilding: How informative is the order book?, *Journal of Finance* 58, 1415-1443.

Correia, M. M. 2014, Political connections and SEC enforcement, *Journal of Accounting and Economics* 57(2–3): 241-262.

De Figueredo, J. and B. K. Richter, 2014, Advancing the empirical research on lobbying, *Annual Review of Political Science* 17, 163-185.

Demers, E. and K. Lewellen, 2003, The marketing role of IPOs: evidence from internet stocks, *Journal of Financial Economics* 68, 413-437.

Derrien, F. and K. L. Womack, 2003, Auctions vs. bookbuilding and the control of underpricing in hot IPO markets, *Review of Financial Studies* 16, 31-61.

Derrien, F., 2005, IPO pricing in "Hot" market conditions: Who leaves money on the table?, *Journal of Finance* 60, 487-521.

Dewenter, K. L. and P. Maletesta, 1997, Public offerings of state-owned and privately-owned enterprises: An International comparison, *Journal of Finance* 4, 1659-1679.

Drake, K. and M. Vetsuypens, 1993, IPO Underpricing and insurance against legal liability, *Journal of Financial Management* 22, 64-73.

Faccio, M., 2006, Politically connected firms, *American Economic Review* 96, 369-386.

Faccio, M., and D.C. Parsley, 2009, Sudden deaths: Taking stock of geographic ties, *Journal of Financial and Quantitative Analysis* 44, 683-718.

Fan, J., T. J. Wong, T. Zhang, 2007, Politically-connected CEOs, corporate governance and post-IPO performance of China's newly partially privatized firms, *Journal of Financial Economics* 84, 330–357.

Francis, B., I. Hasan, J. Kose, and M. Waisman, 2010, The effect of state antitakeover laws on the firm's bondholders, *Journal of Financial Economics* 96, 127-154.

Francis, B. B., I. Hasan, X. Sun, 2009, Political connections and the process of going public: Evidence from China, *Journal of International Money and Finance* 28, 696-719.

Grier, K. B. and M. C. Munger, 1993, Comparing interest group PAC contributions to House and Senate incumbents, 1980–1986, *Journal of Politics* 55, 615-643.

Grier, K.B., M.C. Munger, and B. E. Roberts, 1994, The determinants of industry political activity, 1978–1986, *American Political Science Review* 88, 911–926.

Goldman, E., J. Rocholl, J. So, 2009, Do politically connected boards affect firm value? *Review of Financial Studies* 22, 2331-2360.

Gompers, P., 1996, Grandstanding in the venture capital industry, *Journal of Financial Economics* 42, 133-156.

Grossman, G. M., Helpman, E., 1994, Protection for Sale, *American Economic Review* 84, 833-850.

Habib, M. and A. Ljungqvist, 2001, Underpricing and entrepreneurial wealth losses in IPOs; theory and evidence, *Review of Financial Studies* 14, 433-458.

Hanley, K., 1993, The underpricing of initial public offerings and the partial adjustment phenomenon, *Journal of Financial Economics* 34, 231-250.

Hart, D. M., 2001, Why do some firms give? Why do some give a lot?: High-tech PACs, 1977–1996, *Journal of Politics* 63, 1230-1249.
Hausman, J. A., 1978, Specification tests in econometrics, *Econometrica* 46, 1251-1271.
Heckman, J.J., 1979, Sample selection bias as a specification error, *Econometrica* 47, 153-161.
Houston, J. F., L. Jiang, C. Lin, and Y. U. E. Ma, 2014, Political Connections and the Cost of Bank Loans, *Journal of Accounting Research* 52, 193-243.
Hsu, D. H., 2004, What do entrepreneurs pay for venture capital affiliation? *Journal of Finance* 59, 1805-1844.
Hughes, P. and A. Thakor, 1992, Litigation risk, intermediation, and the underpricing of initial public offerings. *Review of Financial Studies* 5, 709-742.
Ibbotson, R., 1975, Price performance of common stock new issues, *Journal of Financial Economics* 2, 235-272.
Jenkinson, T. and C. Mayer, 1988, The privatisation process in France and the UK, *Economic Review*, 482–490.
Jensen, M., 1986, Agency costs of free cash flow, corporate finance and takeovers, *American Economic Review* 76, 323-329.
Kroszner, R. S. and T. Stratmann, 1998, Interest-group competition and the organization of congress: Theory and evidence from financial services' Political Action Committees, *American Economic Review* 88, 1163-1187.
Leech, B. L., F. R. Baumgartner, T.M. La Pira, and N.A. Semanko, 2005, Drawing lobbyists to Washington: Government activity and the demand for advocacy, *Political Research Quarterly* 58, 19-30.
Lee, P. M. and S. Wahal, 2004. Grandstanding, certification and the underpricing of venture capital backed IPOs, *Journal of Financial Economics* 73, 375-407.
Ljungqvist, A. and J. Wilhelm, 2003, IPO pricing in the dot-com bubbles: Complacency or incentives, *Journal of Finance* 58, 723-752.
Logue, D., 1973, On the pricing of the unseasoned equity issues: 1965-1969, *Journal of Financial and Quantitative Analysis* 8, 91-103.
Loughran, T. and J. Ritter, 2002, Why don't issuers get upset about leaving money on the table of IPOs?, *Review of Financial Studies* 15: 413-443.
Loughran, T. and J. Ritter, 2004, Why has IPO underpricing changed over time?, *Financial Management* 33, 5-37.
Lowery D., and H. Brasher, 2004, Organized interests and American government, New York: McGraw Hill.
Lowry, M. and K. Murphy, 2007, Executive stock options and IPO underpricing, *Journal of Financial Economics* 85, 39–65.
Lowry, M. and S. Shu, 2002, Litigation risk and IPO underpricing, *Journal of Financial Economics*, 65, 309-335.
Lowry, M. and G. W. Schwert, 2004, Is the IPO pricing process efficient?, *Journal of Financial Economics* 71, 3-26.
Masters, M. and G. Keim, 1985, Determinants of PAC participation among large corporations, *Journal of Politics* 47: 1158–1173.
Megginson, W. and K. Weiss-Hanley, 1991, Venture capitalist in Initial public offerings, *Journal of Finance* 46: 879--903.
Milyo, J., D. Primo, T., Groseclose, 2000, Corporate PAC campaign contributions in perspective, *Business and Politics* 2, 75-88.
Niederhoffer, V., S. Gibbs, J. Bullock, 1970, Presidential elections and the stock market, *Financial Analysts Journal* 26, 111-113.
Perotti, E. and S. Guney, 1993, Successful privatization plans: enhanced credibility through timing and pricing of sales, *Financial Management* 22, 84–98.
Ramanna, K. and S. Roychowdhury, 2010, Elections and Discretionary Accruals: Evidence from 2004, *Journal of Accounting Research* 48, 445-475.
Riley, W. B., Jr. and W. A. Luksetich, 1980, The market prefers republicans: Myth or reality, *Journal of Financial and Quantitative Analysis* 15, 541-560.
Ritter, J., 1984, Signaling and the valuation of unseasoned new issues: A comment, *Journal of Finance* 39, 1231-1237.
Ritter, J. 1991, The long performance of Initial Public Offerings, *Journal of Finance* 46, 3-28.
Ritter, J. and I. Welch, 2002, A review of IPO activities, pricing and allocation, *Journal of Finance* 57, 1795-1828.
Roberts, B. E., 1990, A dead Senator tells no lies: Seniority and the distribution of federal benefits, *American Journal of Political Science* 34, 31-58.
Goldman, E., J. Rocholl, and J. So, 2013, Politically connected boards of directors and the allocation of procurement contracts, *Review of Finance 17,* pp. 1617–1648
Rock, K., 1986, Why new issues are underpriced, *Journal of Financial Economics* 15, 187-212.
Ross, S., 1977, The determination of financial structure: The incentive signalling approach, B*ell Journal of Economics* 8, 23-40.
Skaife, H.A., and D. Veenman, and T., Werner, 2013, Corporate Lobbying and CEO Pay, Working Paper - University of Texas, 1 -46
Schultz, P., 1993, Unit initial public offerings: A form of staged financing." *Journal of Financial Economics* 34, 199-229.
Shon, J.J., 2010, Do stock returns vary with campaign contributions? Bush vs. Gore: The Florida recount, *Economics & Politics* 22, 257-281.
Spatt, C. and A. Siristrava, 1991, Pre-play communication, participation restrictions, and efficiency in initial public offerings, *Review of Financial Studies* 4, 709-726.
Spence, A. M., 1973, Job market signaling, *Quarterly Journal of Economics*, 355-374.
Stigler, G. J., 1971, The theory of economic regulation, *Bell Journal of Economics and Management Science*, 3-21.
Stratmann, T., 1991, What do campaign contributions buy? Deciphering causal effects of money and votes, *Southern Economic Journal* 57, 606-620.
Stratmann, T.,1995, Campaign contributions and congressional voting: Does the timing of contributions matter?" Review of Economics and Statistics 77, 127-136.
Stratmann, T., 1998, The market for congressional votes: Is timing of contributions everything?, Journal of Law and Economics 41, 85-114.
Stoll, H. and A., Curley, 1970, Small business and the new issues market for equities, *Journal of Financial and Quantitative Analysis* 1, 309-322.
Trueman, B., M.H.F. Wong, and X. Zhang, 2000, The eyeballs have it: Searching for the value in internet stocks, Journal of Accounting Research 38, 137-162.
Yu, F. and X. Yu, 2011, Corporate lobbying and fraud detection, Journal of Financial and Quantitative Analysis 46, 1865.
Welch, I., 1992, Sequential sales, learning and cascades, Journal of Finance 47, 695-732.
Wooldridge, J., 2002, Econometric analysis of cross section and panel data, MIT Press.
Zardkoohi, A., 1985, On the political participation of the firm in the electoral process, *Southern Economic Journal* 51,804–817

Variable	Definition
	Panel A: IPO pricing
First-day return	The difference between the first secondary market closing price available on CRSP and IPO offer price, divided by IPO offer price. This variable is transformed into the regression models by adding 1 and taking the natural logarithm.
Revisions	The difference between IPO offer price and midpoint of initial filing price range, divided by IPO offer price.
Absolute revisions	The absolute magnitude of the *Revisions* variable.
	Panel B: Contributions
PMC	Dummy variable set to 1 for IPOs with lobbying or PAC contributions, else 0.
Political money	The natural logarithm of all lobbying and PAC contributions made in the election cycle most closely preceding the IPO with an oldness cutoff set at 5 years.
Lobby money	The natural logarithm of total lobbying dollars in the year most closely preceding the IPO, with an oldness cutoff set at 5 years.
PAC money	The natural logarithm of total dollar contributions towards candidates in the election cycle most closely preceding the IPO, with an oldness cutoff set at 5 years.
House money	The natural logarithm of total dollar contributions towards House of Representatives candidates in the election cycle most closely preceding the IPO, with an oldness cutoff set at 5 years.
Senate money	The natural logarithm of total dollar contributions towards Senate candidates in the election cycle most closely preceding the IPO, with an oldness cutoff set at 5 years.
Democrat money	The natural logarithm of total dollar contributions towards Democratic candidates in the election cycle most closely preceding the IPO, with an oldness cutoff set at 5 years.
Republican money	The natural logarithm of total dollar contributions towards Republican candidates in the election cycle most closely preceding the IPO, with an oldness cutoff set at 5 years.
Both lobby - PAC	Dummy variable set to 1 for IPOs with both lobby and PAC contributions, else 0.
Just lobby	Dummy variable set to 1for IPOs with lobbying contributions only, else 0.
Just PAC	Dummy variable set to 1 for IPOs with PAC contributions only, else 0.
	Panel C: IPO characteristics
Firm age	The number of years elapsed since firm's foundation to IPO date, using foundation dates from the Field-Ritter database. The variable is transformed into the regressions by adding 1 and taking the natural logarithm
Venture capital	Dummy variable set to 1 for venture capital-backed firms, else 0.
Proceeds	Gross proceeds raised by the IPO estimated as shares offered times the offer price.
Dotcom period	Dummy variable set to 1 for IPOs within the 1999-2000 period, else 0.
Internet firm	Dummy variable set to 1 for IPOs of Internet firms, else 0. As Internet firms are classified those with business description sections in Thomson Financial SDC containing any of the words "Internet", "Online", "eBusiness", "eCommerce", and "Website".
Technology firm	Dummy variable set to 1 for IPO firms with SIC codes 3571, 3572, 3575, 3577, 3578 (i.e. computer hardware); 3661, 3663, 3669 (i.e. communications equipment); 3671, 3672, 3674, 3675, 3677, 3678, 3679 (i.e. electronics); 3812 (i.e. navigation equipment); 3823, 3825, 3826, 3827, 3829 (i.e. measuring and controlling devices); 3841, 3845 (i.e. medical instruments); 4812, 4813 (i.e.

	telephone equipment); 4899 (i.e. communications services); and 7371, 7372, 7373, 7374, 7375, 7378,7379 (i.e. software), else 0.
Underwriter ranking	Dummy variable set to 1 for IPOs engaging underwriters of the highest prestige ranking (a value of 9) in the Loughran and Ritter (2004) database, else 0.
Share overhang	The ratio of shares retained by the pre-IPO shareholders over shares issued in the offering.
Credit crunch	Dummy variable set to 1 for IPOs within the financial ('credit crunch') crisis of 2007–2008, else 0.
NASDAQ	Dummy variable set to 1 for NASDAQ-listed IPOs, else 0.
Market return	The compounded daily return on the CRSP value-weighted index over the 20 trading days trailing the IPO.
Panel D: Firm fundamentals	
Assets	The trailing book-value of annual assets in millions of U.S. dollars.
Earnings per share	Dummy variable set to 1 for positive earnings per share in the last fiscal year prior to IPO, else 0.
Leverage	Defined as the ratio of total liabilities over total assets in the last fiscal year prior to IPO.
Panel E: PMC determinants	
Regulated industry	Dummy variable set to 1 for IPO firms with SIC codes of 4900–4939 (electric and gas), 1300 (oil and gas extraction), 4000– 4700 (transportation), 4800 (telecommunications), 4950–4959 (sanitary services) and all 6000s (financial companies), else 0.
Pre-IPO mgt ownership	Percentage of total shares held by executive officers & directors prior to IPO, with hand-collected data from the IPO prospectuses.
Bills introduced	The number of bills and joint resolutions introduced in each 2-year Congress.
Electoral College	The electoral college votes corresponding to IPO firm's headquarters state.
Cash flow	The natural logarithm of net income before extraordinary items plus depreciation and amortization minus dividends on common and preferred stock. The data comes from the last fiscal year prior to IPO with all amounts in millions of dollars.
Industry PMC	The number of firms in industry (at the 4-digit level of SIC code) with a traceable PMC record.
R&D	Dummy variable set to1 for IPO firms reporting an R&D figure, else 0.
HHI	The Herfindahl -Hirschman index (HHI) of industry concentration constructed with net revenues from Compustat.
Business segments	The number of firm's business segments as given by the Compustat segment file.
Geographic segments	The number of firm's geographic segments as given by the Compustat segment file.
Media coverage	Dummy variable: 1 for IPOs within the top 25th percentile of results returned by the LexisNexis database n the year prior to PMC, else 0.
Government purchases	Dummy variable set to1 for the five sectors topping the Economic Census list of U.S. public spending i.e. the sectors of defense, heath, energy, transportation and education, else 0.
Unionized employees	Percentage of industry-wide (at the 4-digit level of SIC code) participation of employees in labour unions as reported in Hirsch and Macpherson (2003).

Table 1: Summary Statistics

This table presents statistics for a sample of 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013 along with the sub-samples of IPOs with and without PMC activity. The IPOs are described by (1) the election cycle in which they occur, (2) the Standard Industrial Classification (SIC) division they belong, (3) company specific information, and (4) market value measures. All variables are defined in Appendix A. IPO deals are retrieved from the Securities Data Company (SDC) Database with all aftermarket data obtained from CRSP. PMC data comes from the OpenSecrets website for lobbying contributions and the Federal Election Commission (FEC) archive for PAC contributions. The book value of assets for Tobin's q is from Compustat.

	Full sample (N= 1,578)		IPOs with PMC (N = 273)		IPOs without PMC (N=1,305)	
Election cycle	No.	%	No.	%	No.	%
98-99	465	29.47	30	10.99	435	33.33
00-01	160	10.14	24	8.79	136	10.42
02-03	94	5.96	15	5.49	79	6.05
04-05	271	17.17	60	21.98	211	16.17
06-07	247	15.65	52	19.05	195	14.94
08-09	56	3.55	20	7.33	36	2.76
10-11	151	9.57	42	15.38	109	8.35
12-13	134	8.49	30	10.99	104	7.97
SIC division	No.	%	No.	%	No.	%
Agriculture, Forestry and fishing	4	0.25	1	0.37	3	0.23
Mining and construction industries	49	3.11	13	4.76	36	2.76
Manufacturing	535	33.90	95	34.80	440	33.72
Transp., commun., and utilities	122	7.73	35	12.82	87	6.67
Wholesale and retail trade	122	7.73	15	5.49	107	8.20
Finance, insurance and real estate	185	11.72	41	15.02	144	11.03
Service industries	559	35.42	73	26.74	486	37.24
Public administration	2	0.13	0	0.00	2	0.15
Company specifics		%		%		%
Regulated industry IPOs		21.4		29.3		19.7
Internet IPOs		12.6		9.5		13.9
Technology IPOs		37.9		27.8		40.1
VC Backed IPOs		47.2		35.5		49.7
NASDAQ IPOs		69.4		49.8		73.5
Market value	Mean	Median	Mean	Median	Mean	Median
	s.d.		s.d		s.d.	
Market cap. (in mil $)	834.51	322.91	2,441.55	708.08	498.33	285.55
	3,980.58		9,250.37		812.20	
Tobin's q	2.87	2.33	2.33	1.63	2.98	2.48
	3.06		2.65		3.13	

Table 2: Descriptive Statistics of IPO firms

This table reports descriptive statistics for a sample of 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013 along with the sub-samples of IPOs with and without PMC activity. All IPOs come from the Securities Data Company (SDC) database. The statistics provided include the mean, median, minimum, maximum and standard deviation for the dependent variables and all control variables used in the subsequent regressions. The presentation of each variable concludes with a test for difference in the sub-sample means. Panel A describes our main measures of IPO pricing, i.e. *underpricing* and *revisions.* Note that revisions, due to data availability limitations, engage a sample of 1,171 IPOs. Panel B describes the IPO firm characteristics which we control for in our analysis. Share price data is from CRSP; accounting data is from Compustat. All variables are defined in Appendix A

	Full Sample (N= 1,578)				IPOs with PMC (N = 273)				IPOs without PMC (N=1,305)				P-value
	Mean	Median	Min	Max	Mean	Median	Min	Max	Mean	Median	Min	Max	of T -Diff
	s.d.				s.d.				s.d.				
Panel A – IPO pricing													
First-day return	0.27	0.12	-0.71	6.84	0.19	0.09	-0.70	4.83	0.29	0.12	-0.37	6.84	0.01
	0.58				0.43				0.60				
Revisions	-0.01	0.00	-0.54	1.10	-0.02	0.00	-0.50	0.50	0.00	0.00	-0.54	1.10	0.02
	0.15				0.15				0.15				
Panel B– IPO characteristics													
Gross proceeds	137.66	66.04	0.86	11,805	354.11	121.36	9.35	11,805	92.39	60.81	0.86	14,266	0.00
	465.40				1,065				114.44				
Earnings per share	0.47	0.00	0.00	1.00	0.56	1.00	0.00	1.00	0.45	0.00	0.00	1.00	0.00
	0.50				0.50				0.50				
Leverage	1.50	0.94	0.00	81.50	1.17	0.91	0.00	6.78	1.56	0.95	0.00	81.50	0.05
	3.11				0.96				3.39				
Firm age	16.37	8.00	0.00	165.00	24.89	11.00	0.00	165.00	14.58	8.00	0.00	45.00	0.00
	23.15				32.05				20.39				
Venture capital	0.47	0.00	0.00	1.00	0.36	0.00	0.00	1.00	0.50	0.00	0.00	1.00	0.00
	0.50				0.48				0.50				
Underwriter ranking	0.62	1.00	0.00	1.00	0.82	1.00	0.00	1.00	0.58	1.00	0.00	1.00	0.00
	0.49				0.38				0.49				
Internet IPOs	0.13	0.00	0.00	1.00	0.10	0.00	0.00	1.00	0.13	0.00	0.00	1.00	0.10
	0.33				0.29				0.34				
Technology IPOs	0.38	0.00	0.00	1.00	0.28	0.00	0.00	1.00	0.40	0.00	0.00	1.00	0.00
	0.49				0.45				0.49				
NASDAQ	0.69	1.00	0.00	1.00	0.50	0.00	0.00	1.00	0.74	1.00	0.00	1.00	0.00
	0.46				0.50				0.44				
Dotcom period	0.37	0.00	0.00	1.00	0.15	0.00	0.00	1.00	0.42	0.00	0.00	1.00	0.00
	0.48				0.36				0.49				
Credit crunch	0.11	0.00	0.00	1.00	0.20	0.00	0.00	1.00	0.09	0.00	0.00	1.00	0.00
	0.31				0.40				0.29				
Share overhang	3.53	2.88	0.00	80.75	3.70	2.97	0.00	50.34	3.49	2.87	0.00	80.75	0.35
	3.41				3.67				3.35				

Table 3: Top-fifteen Donors and Recipients of IPO Contributions

This table identifies, on a top-fifteen basis, cases of intense PMC activity. The sample consists of 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013 which we retrieve from the Securities Data Company (SDC) database and manually search for evidence of lobbying or PAC contributions in the OpenSecrets website and the Federal Election Commission (FEC) archive, respectively. Panel A presents the IPO firms topping our list for largest contributions along with the first-day returns recorded. Panel B presents the most popular recipient candidates based on aggregate PAC funds raised and identifies them by race, political party, and U.S. state affiliations. All variables are defined in Appendix A

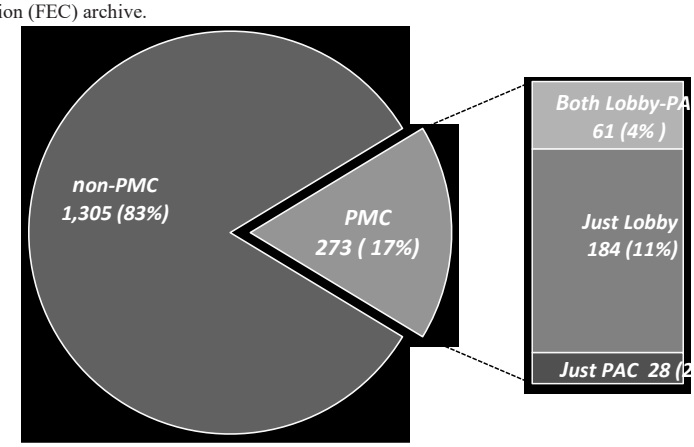
Panel A: Top-fifteen IPO donors of lobbying and PAC contributions

IPO date	Company	Age at IPO	1st-day return (annual avg.)	1st-day return (company)	Lobbying *(U.S. $)*	PAC *(U.S. $)*
11/17/2010	General Motors	102	9.30%	3.61%	9,570,000	284,500
10/26/1999	PentaStar Commun.	1	70.30%	7.50%	5,580,000	49,000
12/12/2001	Prudential Financial	100	14.30%	6.55%	4,110,000	187,200
02/04/1998	Vysis Inc (BP Amoco)	7	21.40%	0.52%	3,520,000	172,000
09/30/2009	Talecris Biotherapeutics	4	10.60%	11.32%	2,950,000	0
10/22/2001	Principal Financial Group	100	14.30%	13.51%	2,560,000	0
11/09/1999	UPS	92	70.30%	36.25%	2,480,000	15,000
04/04/2000	MetLife	132	7.20%	3.51%	1,840,000	595,525
11/14/2006	Emergent BioSolutions	8	11.60%	-6.40%	2,000,000	300,000
03/16/2005	PanAmSat Holding	1	10.10%	-3.61%	2,020,000	0
10/12/2006	SAIC	37	11.60%	21.20%	1,950,000	40,000
11/14/2007	EnergySolutions	19	14.30%	0.04%	1,020,000	780,000
12/13/2001	United Defense Industries	60	14.30%	1.42%	1,560,000	181,100
05/17/2012	Facebook	8	17.80%	0.61%	1,350,000	270,000
05/24/2006	MasterCard	40	11.60%	17.95%	1,420,000	186,973

Panel B: Top-fifteen recipient candidates of PAC contributions by funds raised

Election cycles	Candidate	Race	Party	State	PAC funds raised *(U.S. $)*
1998-2007	Santorum, Rick	Senate	Republican	Pennsylvania	109,450
1998-2007	Moran, Jim	House	Democratic	Virginia	102,850
1998-2013	Hoyer, Steny	House	Democratic	Maryland	101,500
1998-2009	Murtha, John	House	Democratic	Pennsylvania	92,500
1998-2013	McConnell, Mitch	Senate	Republican	Kentucky	91,300
1998-2007	Davis, Tom	House	Republican	Virginia	89,999
1998-2009	Wilson, Heather	House	Republican	New Mexico	85,000
1998-2009	Hastert, Dennis	House	Republican	Illinois	83,597
1998-2011	Lewis, Jerry	House	Republican	California	83,100
1998-2013	Dingell, John	House	Democratic	Michigan	82,570
2000-2013	Hatch, Orrin	Senate	Republican	Utah	81,500
1998-2009	Rangel, Charles	House	Democratic	New York	80,848
1998-2011	Barton, Joe	House	Republican	Texas	75,000
1998-2007	Johnson, Nancy	House	Republican	Connecticut	74,500
1998-2013	Blunt, Roy	Senate	Republican	Missouri	73,150

Figure 1: Breakdown of IPO PMC expenditure by type. This chart portrays IPOs with political money contributions (PMC) as a fraction of a total sample of 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013; and contribution combinations as fractions of the PMC sample. *Both Lobby-PAC* refers to IPOs practicing both lobbying and PAC contributions; *Just Lobby* and *Just PAC* refer to IPOs practicing exclusive lobbying and PAC contributions, respectively. IPOs come from the Securities Data Company (SDC) Database. The lobbying data is from the OpenSecrets website; the PAC data is from the Federal Election Commission (FEC) archive.



PMC total: $ 81,038,007; Lobbying: $ 74,286,745; PAC: $ 6,751,262

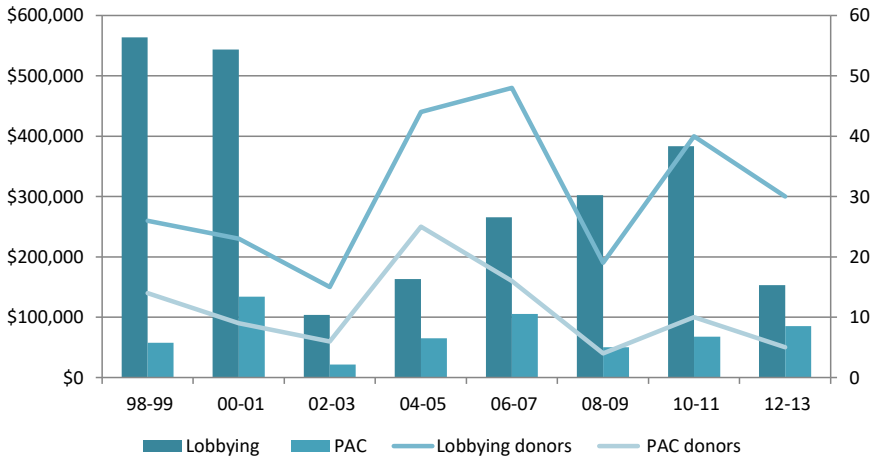
Table 4: Descriptive Statistics of Contributions

This table reports statistics of the annual political money contributions made by a sample of of 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013. The contributions correspond to the recent-most year to IPO, with an oldness cutoff set at 5 years. The data for lobbying contributions is from the OpenSecrets website; the data for PAC contributions is from the Federal Election Commission (FEC) archive. *Political money* measures the aggregate annual contributions regardless of contribution type; *Lobby money* and *PAC money* measure the annual contributions for lobbying and PAC, respectively; *No. of candidates* corresponds to the number of candidates that received PAC money; *Incumbents* and *Challengers* measure the annual contributions targeted at incumbent and challenger candidates respectively; *House, Senate, Democrats* and *Republicans* refer to contributions targeted at House, Senate, Democrats and Republicans, respectively; *Committee chairs* and *Ranking members* refer to contributions targeted at candidates who have been committee chairs and ranking members in Congressional committees, respectively; *Home state candidates* refers to contributions targeted at candidates representing the state of firm's headquarters.

Variable		N	Mean	Median	Std Dev	Minimum	Maximum
Political money		273	296,843	71,500	863,193	1,500	9,854,500
Lobby money		245	303,211	80,000	869,379	5,000	9,570,000
PAC money		89	75,857	18,075	135,969	1,000	780,000
PAC specifics	No. of candidates		41	10	77	0	530
	Incumbents		69,762	16,000	128,980	500	775,000
	Challengers		6,095	1,000	12,808	0	78,207
	House		38,988	7,000	87,462	0	625,000
	Senate		36,869	10,000	67,992	0	780,000
	Democrats		33,121	10,000	49,841	0	299,730
	Republicans		42,489	4,000	101,464	0	600,000
	Committee chairs		17,278	3,500	36,581	0	282,500
	Ranking members		13,967	4,000	23,014	0	138,500
	Home state candidates		9,425	2,000	17,074	0	92,701

Figure 2: PMC sources and targets, election cycles 1998-2013. The data comes from the OpenSecrets website for lobbying contributions and the Federal Election Commission (FEC) archive for PAC contributions. The sample includes 273 IPOs that have practiced any contribution type over the election cycles 1998-2013. Panel A tracks the average lobbying and PAC expenditure as well as average number of lobbying and PAC donor IPOs, per election cycle. Panel B tracks the recipient candidates of PAC contributions and reports the average contributions that reach (1) the races for the U.S. Senate and House of Representatives, and (2) the Republican and Democratic parties, per election cycle.

Panel A: Contribution amounts and number of IPO donors by type



Panel B: Contribution amounts by Congress chamber & political party

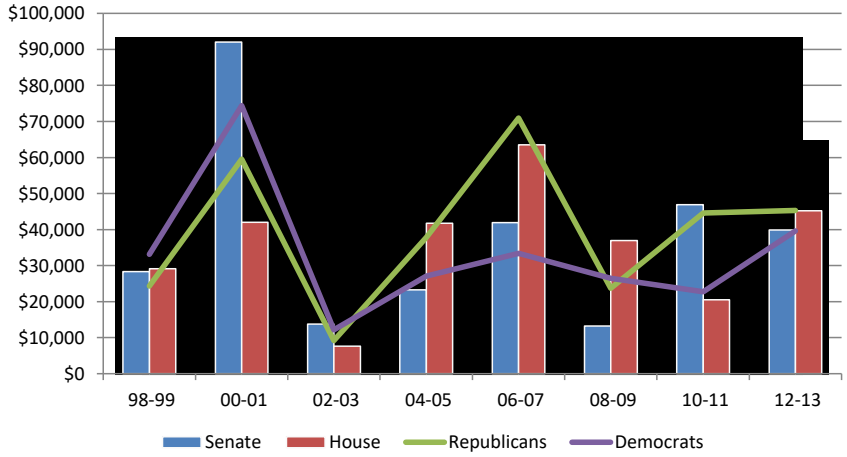


Table 5: Correlation Matrix

This table reports pairwise correlations of variables used in the study. The sample includes 1,578 U.S. IPOs announced from 1 January, 1998 to 30 June, 2013. Panel A presents correlations of control variables; Panel B presents correlations of the PMC variables. IPO deals are retrieved from the Securities Data Company (SDC) Database with aftermarket and accounting data obtained from CRSP and Compustat databases, respectively. PMC data comes from (1) the OpenSecrets website for lobbying contributions and (2) the Federal Election Commission (FEC) archive for PAC contributions. All variables are fully defined in Appendix A.

	Panel A: IPO variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Proceeds												
2.	Earnings per share	0.08											
3.	Leverage	-0.04	-0.18										
4.	Firm age	0.19	0.24	-0.08									
5.	Venture capital	-0.09	-0.39	0.08	-0.29								
6.	Dotcom period	-0.06	-0.18	-0.03	-0.14	0.08							
7.	Credit crunch	0.02	0.06	-0.01	0.03	-0.01	-0.27						
8.	Internet firm	0.01	-0.19	0.04	-0.16	0.20	0.22	-0.06					
9.	Technology firm	-0.05	-0.22	-0.01	-0.20	0.32	0.21	-0.02	0.16				
10.	Underwriter	0.14	0.04	-0.05	0.10	0.06	-0.18	0.13	-0.02	0.04			
11.	Share overhang	0.03	-0.07	-0.04	-0.08	0.13	0.14	-0.05	0.12	0.13	0.11		
12.	NASDAQ	-0.16	-0.22	0.06	-0.23	0.32	0.14	-0.02	0.14	0.19	-0.19	-0.01	
13.	Market return	-0.02	-0.02	0.03	0.05	0.01	-0.01	-0.04	-0.04	-0.02	-0.04	-0.03	-0.01

	Panel B: PMC variables	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
14.	Political money									
15.	Lobby money	0.90								
16.	PAC money	0.45	0.36							
17.	House money	0.29	0.21	0.91						
18.	Senate money	0.53	0.47	0.86	0.59					
19.	Democrat money	0.52	0.46	0.82	0.95	0.89				
20.	Republican money	0.35	0.27	0.95	0.62	0.73	0.63			
21.	$PI^{ABILITY}$	0.30	0.27	0.38	0.23	0.48	0.50	0.26		
22.	$PI^{STRENGTH}$	0.69	0.65	0.60	0.50	0.59	0.63	0.50	0.59	
23.	PI^{POWER}	0.66	0.63	0.58	0.47	0.57	0.61	0.48	0.40	0.83

Table 6: Determinants of PMC Involvement for IPO firms

This table reports the results of a probit regression for the probability of PMC involvement on a list of identified PMC determinants. The sample consists of U.S. IPOs (N=1,578) announced over the period 1 January, 1998 to 30 June, 2013. The first column reports the resulting coefficients and the second the z-Statistics. All variables are defined in Appendix A. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

	Coefficient	z-Statistic
Firm profile & visibility		
Assets	0.249***	6.96
Cash flow	0.057*	1.86
Firm age	-0.026	-0.62
Media coverage	0.310***	3.47
Internal politics		
Pre-IPO mgt ownership	0.590***	3.71
Unionized employees	-0.133	-0.27
Venture capital	0.186*	1.71
Political exposure		
Industry PMC	0.001***	2.8
HHI	-0.451	-0.74
Electoral College	-0.001	-0.13
Bills introduced	0.009***	7.33
Operational complexity		
R&D	0.720***	6.95
Regulated industry	0.341***	3.23
Government purchases	0.314**	2.52
Business segments	0.099**	2.4
Geographic segments	-0.011	-0.5
N		1,578
Pseudo-R^2		0.233

Table 7: Effect of PMC Involvement on IPO Underpricing

This table reports results of regressions of IPO underpricing (dependent variable) on a PMC dummy variable and other control variables for a sample of U.S. IPOs (N=1,578) over the period 1 January, 1998 to 30 June, 2013. The PMC variable assumes the value of 1 for any level of PMC activity, otherwise it is 0. All variables are defined in Appendix A. Four estimation procedures are used: Ordinary least-squares (column 1), Heckman two-stage (column 2), Maximum likelihood estimation (column 3) and generated IV approach (columns 4 and 5). The t-statistics reported in parentheses are based on standard errors adjusted for heteroskedasticity. The dependent variable is trimmed at the 1st and 99th percentiles. The lower part of the table provides the Wald and Hausman statistics based on the MLE and IV estimations, respectively, and the instrument t-statistics from the first-stage. An asterisk indicates significance at the 10% level; two at the 5% level; and three at the 1% level.

	OLS (1)	Heckman (2)	MLE (3)	IV (4)	IV (5)
PMC	-0.033**	-0.135***	-0.161***	-0.141***	-0.143**
	(-2.08)	(-3.09)	(-4.65)	(-2.58)	(-2.49)
Firm age	-0.014**	-0.013*	-0.012*	-0.012**	-0.011
	(-2.55)	(-1.80)	(-1.74)	(-2.20)	(-1.64)
Venture capital	0.058***	0.055***	0.054***	0.055***	0.059***
	(3.60)	(3.58)	(3.52)	(3.37)	(3.17)
Proceeds	0.041***	0.051***	0.053***	0.051***	0.058***
	(5.31)	(5.87)	(6.36)	(5.54)	(5.00)
Earnings per share	0.016	0.014	0.014	0.014	0.026
	(1.24)	(0.97)	(0.93)	(1.07)	(1.64)
Leverage	0.001	-0.000	-0.001	-0.000	-0.001
	(0.13)	(-0.03)	(-0.07)	(-0.05)	(-0.77)
Dotcom period	0.166***	0.156***	0.154***	0.156***	0.198***
	(10.79)	(10.06)	(9.99)	(9.59)	(9.31)
Credit crunch	-0.013	-0.005	-0.003	-0.004	0.005
	(-0.69)	(-0.22)	(-0.12)	(-0.22)	(0.24)
Internet firm	0.097***	0.100***	0.101***	0.100***	0.070**
	(3.37)	(4.85)	(4.87)	(3.48)	(2.22)
Tech firm	0.077***	0.074***	0.073***	0.073***	0.062***
	(4.83)	(5.07)	(5.00)	(4.53)	(3.34)
NASDAQ	0.073***	0.067***	0.066***	0.067***	0.067***
	(5.40)	(4.21)	(4.12)	(4.81)	(4.05)
Underwriter rank	0.061***	0.063***	0.064***	0.064***	0.057***
	(3.76)	(4.12)	(4.15)	(3.89)	(3.04)
Share overhang	0.013***	0.013***	0.014***	0.013***	0.016**
	(3.01)	(6.82)	(6.87)	(3.00)	(2.42)
Market return	0.225***	0.237***	0.240***	0.238***	0.246***
	(5.78)	(7.14)	(7.22)	(6.04)	(5.03)
Revisions					0.315***
					(3.81)
Inverse Mills ratio		0.068***			
		(2.59)			
N	1,578	1,578	1,578	1,578	1,171
R-squared (OLS)	0.27				
T-stat instrument, 1st stage		6.75***	6.30***	7.56***	7.02***
Wald test			17.55***		
Hausman test				4.75**	

Table 8: Effect of PMC Level on IPO Underpricing

This table reports results of the cross-sectional OLS regression analysis of IPO underpricing (dependent variable) on PMC level and other control variables. PMC level is defined as the aggregate U.S. dollar contributions resulting from: any combination of lobbying and PAC (Column 1), lobbying (Column 2), and PAC (Column 3). Our sample consists of U.S. IPOs announced over the period 1 January, 1998 to 30 June, 2013 with an extant record of PMC activity. All variables are defined in Appendix A. The dependent variable and aggregate dollar contributions variables are trimmed at the 1st and 99th percentiles. The t-statistics reported in parentheses are based on standard errors adjusted for heteroskedasticity. We use the symbols *, ** and *** to denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Political money	-0.025***		
	(-3.60)		
Lobby money		-0.026***	
		(-3.25)	
PAC money			-0.040***
			(-4.83)
Proceeds	0.017	0.015	0.014
	(0.99)	(0.84)	(1.32)
Earnings per share	0.062**	0.064**	0.054***
	(2.29)	(2.22)	(2.71)
Leverage	-0.039***	-0.038**	-0.047
	(-2.61)	(-2.46)	(-1.00)
Firm age	-0.001	0.002	0.010
	(-0.08)	(0.25)	(1.30)
Venture capital	0.115***	0.122***	0.053
	(2.70)	(2.73)	(1.33)
Dotcom period	0.197***	0.227***	0.034
	(3.49)	(3.67)	(1.04)
Credit crunch	-0.055*	-0.058*	-0.069**
	(-1.87)	(-1.85)	(-2.42)
Internet firm	0.078	0.072	0.004
	(1.21)	(1.12)	(0.07)
Tech firm	0.038	0.029	0.039
	(1.26)	(0.93)	(0.85)
NASDAQ	0.102***	0.090**	0.037
	(2.93)	(2.34)	(1.08)
Underwriter rank	0.091**	0.102**	-0.024
	(1.99)	(2.16)	(-0.55)
Share overhang	0.007	0.005	0.003
	(1.44)	(1.22)	(1.52)
Market return	0.174**	0.213***	0.058
	(2.55)	(2.81)	(0.92)
N	273	245	89
R-squared	0.351	0.363	0.462

Table 9: Underpricing and PAC Recipient Characteristics

The table reports results of the cross-sectional OLS regression analysis of IPO underpricing (dependent variable) on key PAC recipient characteristics for a sample of U.S. IPOs with a record of PMC activity announced over the period 1 January, 1998 to 30 June, 2013. The variables of interest in Columns 1, 2, 3 and 4 are the aggregate dollar contributions towards the House of Representatives, Senate, Democratic party and Republican party, respectively. Columns 5, 6 and 7 use the Cooper et al. (2010) measures for candidate strength, power and ability, respectively. In all regressions, the control variables of Tables 7 and 8 retain their position and are suppressed for simplicity. The dependent variable and aggregate dollar contributions variables are trimmed at the 1st and 99th percentiles. The t-statistics reported in parentheses are based on standard errors adjusted for heteroskedasticity. All variables are defined in Appendix A. We use the symbols *, ** and *** to denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Congress chamber		*Partisan identity*		*Candidate profile*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
House money	-0.0077***						
	(-3.17)						
Senate money		-0.006**					
		(-2.35)					
Democratic money			-0.0067***				
			(-2.74)				
Republican money				-0.0063**			
				(-2.42)			
$PI^{STRENGTH}$					-0.0168***		
					(-2.72)		
PI^{POWER}						-0.0355***	
						(-4.17)	
$PI^{ABILITY}$							-0.0199*
							(-1.70)
N	273	273	273	273	273	273	273
R-squared	0.347	0.341	0.344	0.341	0.345	0.353	0.336

Table 10: Volatility Profile of PMC and Matched non-PMC IPOs

This table reports the mean, standard deviation, minimum and maximum statistics for a sample of 201 PMC IPOs and a matched sample of 201 non-PMC IPOs. A t-test is employed to compare the differences in sample means. The matching is based on the criteria of i) a common 2-digit SIC code ii) proximity in IPO proceeds and iii) a common listing year. The variable analyzed is the 60, 120 and 365 day volatility, defined as the standard deviation of daily returns over the aforementioned intervals. All returns are estimated from the 8th trading day following the IPO and onwards with data from the CRSP database. We use the symbol *** to denote statistical significance at the 1% level.

Variable	Sample	Mean	*Difference in mean t-statistics*	Standard Deviation	Minimum	Maximum
60-day volatility	PMC IPOs	0.031	-3.39***	0.013	0.009	0.078
	Matched IPOs	0.038		0.027	0.013	0.092
120-day volatility	PMC IPOs	0.033	-3.09***	0.013	0.010	0.085
	Matched IPOs	0.042		0.045	0.014	0.088
365-day volatility	PMC IPOs	0.035	-3.05***	0.014	0.011	0.087
	Matched IPOs	0.051		0.069	0.016	0.112

Table 11: Underwriters' Behavior under a PMC Regime

Columns 1 and 2 regress absolute offer price revisions and offer price revisions, respectively, on a PMC dummy and other covariates for a sample of U.S. IPOs (N=1,171) over the period 1 January, 1998 to 30 June, 2013. Columns 3 and 4 use IPO first-day returns as the dependent variable for a sample of U.S. IPOs (N=1,578) over the same time period. The unconnected dummy in Column 3 is set to 1 for underwriters which abstain from political contributions in the year that they underwrite a PMC IPO; in Column 4 the unconnected dummy is set to 1 for underwriters that underwrite no more than 1 PMC IPO in any given year. All other variables are defined in Appendix A. The estimation procedure used is the generated instrumental variables method. T-statistics in parentheses are based on standard errors adjusted for heteroskedasticity. The dependent variable is trimmed at the 1st and 99th percentiles. An asterisk indicates significance at the 10% level; two indicate significance at the 5% level; three indicate significance at the 1% level.

	Absolute revisions	*Revisions*	*First-day return*	
			Direct connections	*Indirect connections*
	(1)	(2)	(3)	(4)
PMC	0.013	-0.131***	-0.132**	-0.107**
	(0.06)	(-4.30)	(-2.39)	(-2.48)
PMC*unconnected			-0.071	-0.133**
			(-1.31)	(-2.04)
Firm age	-0.001	-0.004	-0.013**	-0.011**
	(-0.40)	(-0.97)	(-2.23)	(-1.98)
Venture capital	0.009	0.029***	0.053***	0.054***
	(1.28)	(2.85)	(3.27)	(3.30)
Proceeds	-0.003	0.048***	0.051***	0.051***
	(-0.72)	(8.42)	(5.54)	(5.70)
Earnings per share	-0.014**	0.025***	0.013	0.011
	(-2.08)	(2.70)	(0.98)	(0.85)
Leverage	-0.001	-0.001	-0.001	-0.001
	(-0.03)	(-0.55)	(-0.11)	(-0.11)
Dotcom period	0.002	0.051***	0.154***	0.156***
	(0.32)	(4.83)	(9.63)	(9.67)
Credit crunch	-0.014*	0.020*	-0.002	-0.002
	(-1.76)	(1.65)	(-0.13)	(-0.10)
Internet firm	0.002	0.044***	0.101***	0.097***
	(0.24)	(3.22)	(3.51)	(3.36)
Tech firm	0.018***	0.038***	0.072***	0.071***
	(2.73)	(3.98)	(4.48)	(4.36)
NASDAQ	0.004	0.002	0.067***	0.068***
	(0.67)	(0.21)	(4.84)	(4.89)
Underwriter rank	0.015**	0.008	0.063***	0.058***
	(1.97)	(0.77)	(3.83)	(3.48)
Share overhang	0.001	0.005***	0.013***	0.013***
	(0.45)	(2.65)	(2.96)	(2.96)
Market return	0.023	0.131***	0.240***	0.240***
	(1.43)	(5.77)	(6.12)	(6.08)
N	1,171	1,171	1578	1578

Table 12: Sensitivity Analysis

This table provides a sensitivity analysis for the effect of PMC time and type on initial return and filing price revisions. We use the generated instrumental variables method and report in Panels A, B, and C the resulting coefficients, γ_1 and γ_2, for the return and revisions equations, respectively, along with the heteroskedasticity-robust standard errors. Panel A gives the resulting coefficients from the full PMC sample (i.e. any PMC combination with a cut-off at 5 years prior to IPO). Panel B limits the time window to produce subsamples of firms engaging in PMC i) within 6 months ii) older than 6 months and up to a year, and iii) older than 1 year and up to 5. Panel C distinguishes by PMC type to produce the subsamples of firms engaging in PMC via i) a combination of lobby and PAC contributions '*Both lobby – PAC*' ii) exclusive lobby contributions '*Just lobby*', and iii) exclusive PAC contributions '*Just PAC'*. In all regressions, the control variables of Tables 7and 8 retain their position and are suppressed for simplicity. The dependent variables in both equations are trimmed at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 level, respectively.

	Coefficient (γ_1, γ_2) standard error	
	Underpricing equation	Revisions equation
	(UND= $\beta_1 X + \gamma_1 PMC + \varepsilon_1$)	*(REV= $\beta_2 X + \gamma_2 PMC + \varepsilon_2$)*
Panel A: PMC full sample		
Any PMC type within 5 years	-0.141***	-0.131***
	0.055	0.030
Panel B: PMC subsamples *by time*		
6-months or less	-0.361***	-0.339***
	0.136	0.094
Older than 6-months and up to a year	-0.302**	-0.293***
	0.139	0.080
Older than 1 and up to 5 years	-0.300*	- 0.177*
	0.180	0.097
Panel C: PMC subsamples *by type*		
Both lobby - PAC	-0.365***	- 0.376***
	0.119	0.092
Just lobby	-0.200**	- 0.124**
	0.102	0.055
Just PAC	-0.578**	- 0.722***
	0.289	0.236